Citywide Housing Element 2021-2029 and Safety Element Updates

Draft Environmental Impact Report

prepared by

City of Los Angeles
Department of City Planning
200 North Spring Street, Room 750
Los Angeles, California 90012

prepared with the assistance of

Rincon Consultants, Inc.
250 East 1st Street, Suite 1400
Los Angeles, California 90012

July 2021

RINCON CONSULTANTS, INC.
Environmental Scientists | Planners | Engineers
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1 INTRODUCTION

This document is a Draft Environmental Impact Report (EIR) that analyzes the environmental effects of the proposed 2021-2029 Housing Element Update and proposed Safety Element Update (inclusive of the targeted amendments to the Plan for a Healthy Los Angeles) (hereafter collectively referred to as the "Proposed Project").[1] In accordance with Section 15121(a) of the California Environmental Quality Act (CEQA) Guidelines (California Code of Regulations (CCR), Title 14, Division 6, Chapter 3), the purpose of an EIR is to inform public agency decision-makers and the public generally of the significant environmental effects of a project, identify possible ways to minimize the significant effects, and describe reasonable alternatives to the project.

This section includes: (1) an overview of the purpose of the EIR; (2) a discussion of the agencies that are to review and consider this EIR; (3) an overview of the authority and focus of the EIR; (4) an outline of the type of EIR used for the proposed project; (5) an overview of the public review process for the EIR; (6) a list of the areas of controversy and issues to be resolved by the decision-makers of this EIR; and (7) an overview of the organization of this EIR.

1.1 PURPOSE OF THE EIR

The purpose of this EIR is to assess the potential environmental effects associated with the adoption and implementation of the proposed project. A detailed description of the components of the proposed project is provided in Section 3, *Project Description*, of this EIR.

The CEQA Guidelines help define the role and expectations of this EIR as follows:

- **Informational Document.** An EIR is an informational document that will inform decision-makers as well as members of the public of the significant environmental effects of a project, identify feasible ways to minimize or avoid these effects, and describe a set of reasonable alternatives to the project. The public agency shall consider the information in the EIR along with other information contained in the administrative record (Section 15121[a]).
- **Degree of Specificity.** An EIR on an individual development project will be more detailed in the specific effects of the project than will an EIR on the adoption of a long-range planning document, such as a general plan, general plan element, community plan or zoning ordinance because the

[1] The Draft 2021-2029 Housing Element Update is available for review here: https://planning.lacity.org/plans-policies/housing-element-update#draft-plan. The Draft Safety Element Update is available for review here: https://planning.lacity.org/plans-policies/community-plan-update/general-news-item/draft-safety-element-and-plan-healthy-la.

effects of the individual development can be predicted with greater accuracy. An EIR on a project such as the adoption of a general plan and/or general plan element should focus on the secondary effects that can be expected to follow from the adoption, but need not be as detailed as the analysis on the specific construction project that might follow (CEQA Guidelines Section 15146).

- **Standards of Adequacy.** An EIR should be prepared with a sufficient degree of analysis to provide decision-makers with information that enables them to make a decision that intelligently takes account of environmental consequences. An evaluation of the environmental effects of a proposed project need not be exhaustive, but the sufficiency of an EIR is to be reviewed in the 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 (CEQA Guidelines Section 15151).

The CEQA Guidelines, Section 15382, define a significant effect on the environment as "a substantial, or potentially substantial, adverse change in any of the physical conditions within the area affected by the project, including land, air, water, minerals, flora, fauna, ambient noise, and objects of historic or aesthetic significance." Therefore, in identifying the significant impacts of the proposed project, this EIR concentrates on its substantial physical effects and on mitigation measures to avoid or reduce those effects.

1.2 LEAD, RESPONSIBLE, AND TRUSTEE AGENCIES

The lead agency for the proposed project is the City of Los Angeles (City). The Department of City Planning is responsible for preparing the EIR for the review and consideration of the City Council, as the final decision-maker for the proposed project. The address for the Department of City Planning is:

City of Los Angeles
Department of City Planning
200 North Spring Street, Room 750
Los Angeles, CA 90012

The determination that the City of Los Angeles is the "lead agency" is made in accordance with CEQA Guidelines Sections 15050, 15051, and 15367, which define the lead agency as the public agency that has the principal responsibility for carrying out or approving a project. This EIR reflects the independent judgment of the City regarding the potential environmental impacts, the level of significance of the impacts, both before and after the mitigation measures proposed to reduce the impacts.

Responsible agencies are other agencies responsible for carrying out/implementing a specific component of a project or for approving a project that implements the goals and policies of a general plan. Section 15381

of the CEQA Guidelines defines a "responsible agency" as: "[A] public agency which proposes to carry out or approve a project, for which a lead agency is preparing or has prepared an EIR or Negative Declaration. For purposes of CEQA, the term 'responsible agency' includes all public agencies other than the lead agency that have discretionary approval authority over the project."

The California Department of Housing and Community Development (HCD) reviews and determines whether the proposed Housing Element Update complies with State law. HCD is responsible for the review and certification of the Housing Element, and therefore, is a responsible agency for the Housing Element Update. Although no other agencies have direct approval authority over the Housing Element Update, several other agencies potentially have approval authority over individual developments that could be reasonably anticipated under the Housing Element Update. These agencies include, but are not limited to, California Department of Transportation, California Department of Fish and Wildlife (CDFW), the South Coast Air Quality Management District (SCAQMD), and the Los Angeles Regional Water Quality Control Board. In addition, several state agencies must be allowed the opportunity to review and comment on the Safety Element of the General Plan. The NOP was shared with the California Geologic Survey and California Office and Emergency Services, satisfying the requirement that they be notified of the update. The following agencies must additionally receive a draft of the updated plan for review: the State Fire Board, local fire agencies (LAFD and LA County Fire Department), and the California Geologic Survey. Finally, the Department of Justice is expected to evaluate the complete Los Angeles General Plan upon submission to evaluate compliance with SB 1000.

Trustee agencies have jurisdiction over certain resources held in trust for the people of California. As a policy level document, implementation of the proposed project would not directly propose development in areas where trustee agencies have jurisdiction. However, potential future housing development projects accommodated by the Housing Element Update could be located on lands under trustee agency jurisdiction, at which time subsequent environmental review would occur. The trustee agencies for the proposed project and their responsibilities are summarized in Table 1-1.

Table 1-1 Trustee Agencies

Agency	Responsibility
California Department of Fish and Wildlife	CDFW has jurisdiction over the conservation, protection, and management of wildlife, native plants, and habitat necessary to maintain biologically sustainable populations. As a trustee for these resources, CDFW provides the requisite biological expertise to review and comment upon environmental documents and impacts arising from project activities, as those terms are used in CEQA. (Fish and Game Code Section 1802)
Santa Monica Mountains Conservancy	SMMC has jurisdiction over the preservation and management of parks, trails, and open space for public use and wildlife habitat surrounding the greater metropolitan areas of Los Angeles.
California Coastal Commission	The Coastal Zone was established in the Coastal Act and represents the jurisdictional boundary of the Coastal Commission. The California Coastal Zone is defined in Section 30103 of the Coastal Act. The Coastal Zone generally extends inland 1,000 yards from the mean high tide line of the sea. The Coastal Act empowers local governments to establish a Local Coastal Program (LCP) to administer the Coastal Act within their jurisdiction, and the Coastal Commission is responsible for certifying LCPs. In partnership with coastal cities and counties, the Coastal Commission plans and regulates the use of land and water in the coastal zone.

1.3 AUTHORITY AND FOCUS

The Los Angeles Department of City Planning, serving as the lead agency responsible for administering the environmental review on behalf of the City, determined after preparation of an Initial Study that an EIR is needed to evaluate potentially significant effects that could result from the implementation of the proposed project. The Initial Study is included as Appendix A of this EIR.

The City is required to consider the information in the EIR, along with any other relevant information, in making its decision on the proposed project. Although the EIR does not determine the ultimate decision that will be made regarding implementation of the project, CEQA requires the City to consider the information in the EIR and make findings regarding each significant effect. Once certified, the EIR serves as the environmental document for the proposed project. Other agencies may also use this EIR in their review and approval processes.

1.4 TYPE OF ENVIRONMENTAL REVIEW

The Housing Element of the City's General Plan identifies the City's housing conditions and needs, establishes the goals, objectives, and policies that are the foundation of the City's housing strategy, and provides an array of programs to promote sustainable, mixed-income neighborhoods across the City. The Safety Element of the City's General Plan details background and mapping of various hazard conditions,

and includes high level Goals, Policies, Objectives, and Programs related to disaster prevention, response, and recovery. This EIR considers and evaluates the effects of the Housing Element Update and Safety Element Update (inclusive of technical amendments to the Plan for a Health Los Angeles further described in Chapter 3). This EIR addresses environmental impacts from the proposed project to the level that can be assessed without undue speculation, in light of the scope of the proposed project components.

Consistent with the requirements of CEQA, the EIR analyzes the foreseeable impacts from the build out of the RHNA allocation in consideration of where residential development is currently allowed and where it may be allowed through future rezoning programs, as well as foreseeable indirect impacts from the amendments to the Safety Element, against the existing environment.

Future Use of the EIR and Subsequent Projects

Approval of the Proposed Project does not constitute a commitment to any specific development project. It is contemplated that future site-specific approvals may be evaluated with consideration of the EIR under CEQA rules for subsequent approvals, where applicable, including but not limited to the following:

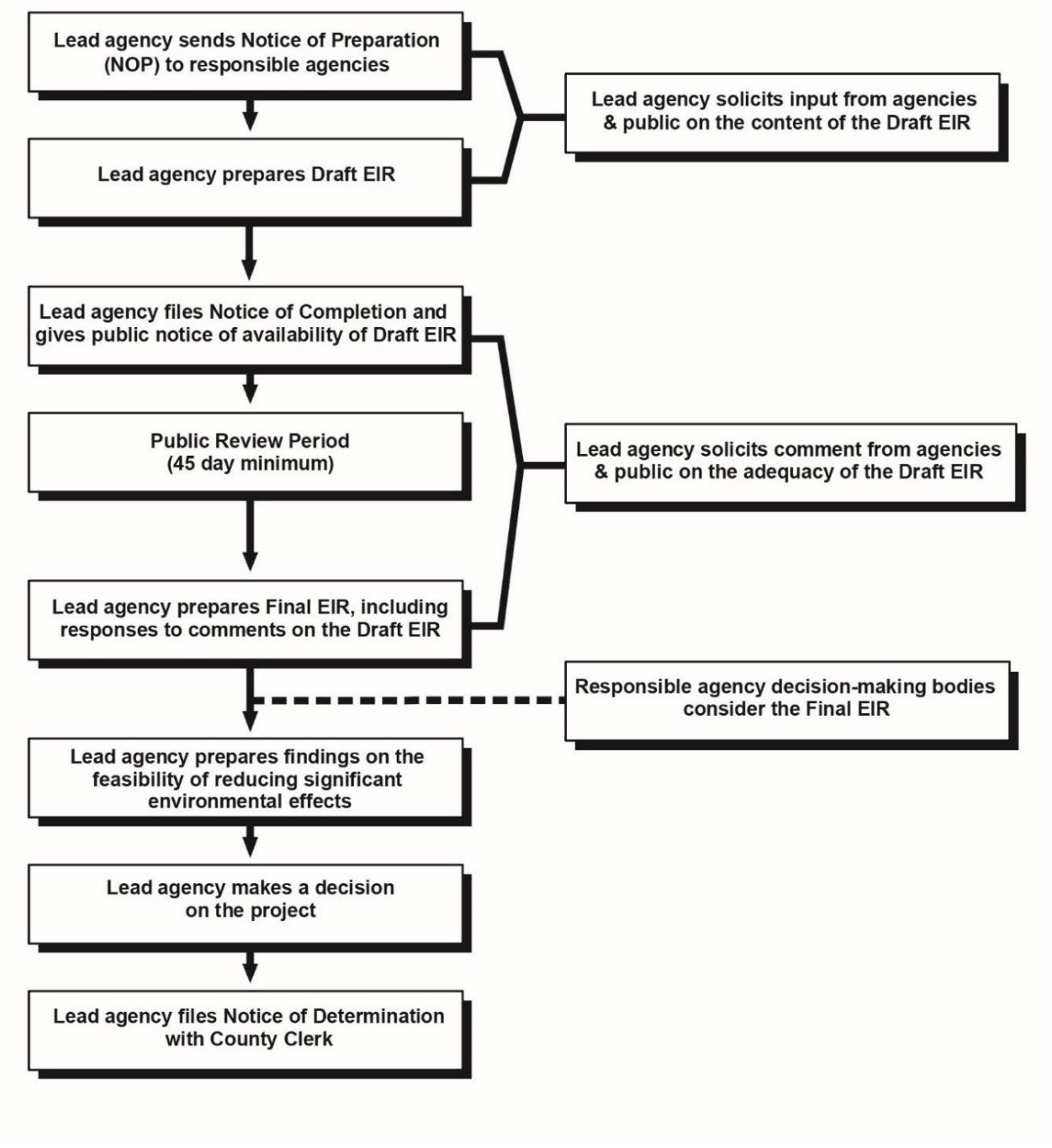
- **Program EIR/Subsequent Approvals (CEQA Guidelines Section 15168).** Projects within the scope of a Program EIR are eligible for streamlined review.
- **Addendums (CEQA Guidelines Sections 15162 and 15164).** Addendums may be used when a subsequent approval is consistent with the Proposed Project and no major revisions to the EIR are required based on a change to the Proposed Project, a change in circumstances, or new information, as a result of a new significant impact or an identified significant impact being more severe.
- **Tiering (Public Resources Code [PRC] Section 21094 and CEQA Guidelines Section 15152).** Tiering refers to using the analysis of general matters contained in a broader EIR with later EIRs and negative declarations on narrower projects; incorporating by reference the general discussion from the broader EIR; and concentrating the later EIR or negative declaration solely on the issues specific to the later project.
- **Projects Consistent with a Community Plan, General Plan, or Zoning (CEQA Guidelines Section 15183).** Streamlined environmental review is available for a project consistent with community plan adopted with an EIR (PRC Section 21083).
- **Streamlining for Infill Projects (SB 226; PRC Section 21094.5; CEQA Guidelines Section 15183.3).** Eligible infill projects may qualify for streamlined environmental review at the project level where the effects of infill development have been addressed in a planning level decision or by uniformly applicable development policies.

- **Transit Priority Projects (SB 375; PRC Section 21155-21155.2).** Transit Priority Projects consistent with the SCAG RTP/SCS near transit that have imposed all or all applicable mitigation measures from a prior EIR may be exempt from CEQA or be subject to streamlined review.

1.5 ENVIRONMENTAL REVIEW PROCESS

The Draft EIR has been prepared to meet all the substantive and procedural requirements of CEQA (PRC Sections 21000 et seq.), as amended, the CEQA Guidelines (California Code of Regulations Title 14, Sections 15000 et seq.), and any rules, regulations, and procedures for the implementation of CEQA adopted by the City of Los Angeles. The environmental impact review process required under CEQA is illustrated in Figure 1-1 described below.

Figure 1-1 The EIR Process



Initial Study to Determine the Focus of the EIR. Consistent with CEQA, the City prepared an Initial Study to determine those impacts from the Proposed Project that would be less than significant or have no impact and those that would have a potential significant impact. Pursuant to CEQA Guidelines Sections 15063(c) and 15143, the City may use an initial study to determine the scope of the impacts to be analyzed in an EIR. Those impacts determined in the Initial Study to be less than significant or have no impact do not require further discussion or analysis in the EIR unless the City subsequently receives information inconsistent with the finding in the Initial Study (CEQA Guidelines Section 15143). A copy of the Initial Study prepared for the Proposed Project is attached as Appendix A. The Initial Study concluded the following impacts would be less than significant or have no impact:

- **Aesthetics:** The potential impacts associated with scenic highways, light and glare would be less than significant under the Housing Element Update. Scenic vistas were found to be less than significant under the Initial Study; however, based on comments provided during the scoping period, scenic vistas are analyzed as they relate to the Housing Element Update in Section 4.1, *Aesthetics*, of this EIR. The Safety Element Update would not result in any adverse impacts related to aesthetics.
- **Agricultural and Forestry Resources:** All the potential impacts associated with agricultural resources and forest land resources would be less than significant under the Housing Element Update and Safety Element Update.
- **Air Quality:** Potential impacts associated with other emissions (such as those leading to odors) under the Housing Element Update were found to be less than significant. The Safety Element Update would not result in any adverse impacts related to air quality.
- **Biological Resources:** Potential impacts associated with wetlands and potential conflicts the provisions of an adopted Habitat Conservation Plan or Natural Community Conservation Plan were found have less than significant or no impacts under the Housing Element and Safety Element Updates. Potential conflicts with local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance, was found to result in less than significant impacts in the Initial Study; however, based on comments provided during the scoping period this impact is analyzed with regards to the Housing Element Update in Section 4.3, *Biological Resources*, of this EIR.
- **Cultural Resources:** Potential impacts associated with the disturbance of human remains would be less than significant under the Housing Element and Safety Element Updates. Adverse changes in the significance of historical and archaeological resources under the Safety Element Update would be less than significant.
- **Energy:** The Housing Element and Safety Element Updates would not result in significant adverse impacts related to energy, and impacts to energy would be less than significant.

- **Geology and Soils:** Potential impacts associated with faults, seismic ground shaking, ground failure (including liquefaction), landslides, soil erosion, unstable geologic unit or soil, expansive soils, and septic tanks would be less than significant under the Housing Element and Safety Element Updates. Additionally, potential impacts associated with unique a paleontological resource or site or unique geologic feature would be less than significant under the Safety Element Update.
- **Greenhouse Gas Emissions:** The Safety Element Update would not result in any adverse impacts related to greenhouse gas emissions.
- **Hazards and Hazardous Materials:** Potential impacts associated with transport, use, or disposal of hazardous materials; safety hazards or excessive noise for people residing or working in within two miles of an airport land use plan; and impairment or interference with an adopted emergency response plan would be less than significant under the Housing Element and Safety Element Updates. Potential hazards associated with wildfires were found to be less than significant under the Initial Study; however, based on comments provided during the scoping period, hazards associated with wildfire are analyzed in Section 4.17, *Wildfire*, of this EIR. The Safety Element Update would not result in any adverse impacts related to hazards and other risks.
- **Hydrology and Water Quality:** Potential impacts associated with surface and ground water quality; the decrease or interference with groundwater supplies; alteration of existing drainage patterns that would result in substantial erosion or increased runoff; release of pollutants in flood hazard, tsunami, or seiche zones; and conflicts with implementation of a water quality control plan or sustainable groundwater management plan would be less than significant under the Housing Element and Safety Element Updates.
- **Land Use and Planning:** Potential impacts associated with the physical division of an established community would have no impact under the Housing Element and Safety Element Updates. Additionally, the Safety Element Update would not result in any adverse impacts resulting from a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect.
- **Mineral Resources:** Potential impacts associated with mineral resources would be less than significant under the Housing Element and Safety Element Updates.
- **Noise:** The Safety Element Update would not result in any adverse impacts related to noise impacts.
- **Population and Housing:** The Safety Element Update would not result in any adverse impacts related to unplanned population growth. Potential impacts related to displacement associated with the Housing Element Update would be less than significant.

- **Public Services:** The Safety Element would not result in any adverse impacts related to police protection, schools, and parks. Potential impacts associated with other public facilities such as public libraries would be less than significant under the Housing Element and Safety Element Updates.
- **Recreation:** The Safety Element Update would not result in any adverse impacts related to recreation.
- **Transportation:** The Safety Element Update would not result in any adverse impacts related to transportation.
- **Tribal Cultural Resources:** The Safety Element Update would not result in any adverse impacts related to tribal cultural resources.
- **Utilities and Service Systems:** Potential impacts associated with waste generation and compliance with regulations related to solid waste were found to be less than significant under the Housing Element and Safety Element Updates.
- **Wildfire:** The Safety Element Update would not result in any adverse impacts related to wildfire.

Notice of Preparation (NOP). Pursuant to CEQA Guidelines Section 15082, on January 13, 2021 the City filed an Initial Study and NOP (IS-NOP) with the State Clearinghouse in the Office of Planning and Research (OPR) (State Clearinghouse No. 2021010130) as an indication that an EIR would be prepared. As required by CEQA Guidelines Section 15375, an NOP is a brief document sent by the lead agency to notify the responsible agencies, trustee agencies, and the public that the lead agency plans to prepare an EIR for a project. The purpose of the notice is to solicit guidance from those agencies and the public as to the scope and content of the environmental information to be included in the Draft EIR and to solicit recommendations and develop information regarding the scope, focus, and content of the Draft EIR.

The IS-NOP for this EIR was circulated to responsible and trustee agencies, Native American Tribes, and interested members of the public. The IS-NOP published on January 13, 2021 by the City Department of Planning for a 30-day public review period. The City announced the availability of the IS-NOP and public scoping meetings through the following:

- Mailings and email announcements to agencies, Native American Tribes, and interested members of the public
- Project website posting: https://planning.lacity.org/development-services/eir/housing-element-2021-2029-update-safety-element-update
- Public posting with the Los Angeles County Registrar-Recorder/County Clerk

Depending on the nature of an EIR, a public scoping period can be either an optional or required activity under CEQA. For projects of statewide, regional, or area-wide significance, CEQA specifies that the lead

agency shall conduct at least one scoping meeting during which participants can assist the lead agency in determining the scope and content of the environmental information required (CEQA Guidelines Section 15082[c]). Public scoping meetings also help accomplish early public consultation with persons or organizations potentially concerned with the environmental effects of the project, prior to Draft EIR completion (CEQA Guidelines Section 15083). Two virtual public meetings were held during the 30-day public comment period in accordance with PRC Section 21083.9. In accordance with the Governor's emergency order as a result of the COVID-19 pandemic, the public scoping meetings were held virtually. The two virtual public scoping meetings were held at the following times:

- January 26, 2021 (5:15 p.m. to 6:30 p.m.)
- January 28, 2021 (11:15 a.m. to 12:30 p.m.)

The meetings were facilitated by the City and generally consisted of a presentation describing the meeting format, description of the Housing Element Update, description of the Safety Element Update, the CEQA process, and opportunities for public involvement. Comments and questions on the scope and content of the Draft EIR were received from various public agencies and individuals from the public.

The City received a total of 252 written and verbal comments and letter responses to the IS-NOP. All comments and responses were reviewed prior to the EIR being completed an information, data and observations addressing comments from these letters are included throughout this EIR where relevant. The IS-NOP and comment letters received are included in Appendix A and Appendix B of this Draft EIR. Those comments that relate to the preparation of the EIR or raise or relate to environmental issues are included in the summary matrix below in Table 1-2 at the end of this section.

Draft EIR. Public and agency review of the project will be further encouraged through the distribution of the Draft EIR. The provisions of Sections 15085(a) and 15087(a)(1) of the CEQA Guidelines require that as soon as the Draft EIR is completed the lead agency must file a Notice of Completion (NOC) with OPR and prepare a public Notice of Availability (NOA) of an EIR. The NOA must be placed in the County Clerk's office for 30 days (PRC Section 21092.3) and provided to all organizations and individuals who have previously requested notification. The City, serving as lead agency, provided the NOC to OPR and circulated an NOA of the Draft EIR to the public, in addition to public agencies, special districts, Tribal representatives, organizations, and individuals that commented on the IS-NOP and/or requested to be kept informed of the Proposed Project.

Additionally, public notice of Draft EIR availability must be given through at least one of the following procedures: a) publication in a newspaper of general circulation; b) posting on and off the project site; and c) direct mailing to owners and occupants of contiguous properties. The City provided notice of the Draft

EIR via newspaper publication in the Los Angeles Time on July 22, 2021. The lead agency must consult with and request comments on the Draft EIR from responsible and trustee agencies, and adjacent cities and counties. The minimum public review period for a Draft EIR is 30 days. When a Draft EIR is sent to the State Clearinghouse for review, the public review period must be 45 days, unless a shorter period is approved by the Clearinghouse (PRC 21091). Distribution of the Draft EIR, prepared for amendments to the City's General Plan elements, will be required to be sent to the State Clearinghouse. Public and agency review of this Draft EIR will be encouraged through distribution of the Draft for a 45-day public review period.

The Draft EIR, as well as all appendices can be viewed at the City of Los Angeles Department of City Planning website at: https://planning.lacity.org/development-services/eir/Housing-Element_2021-2029_Update_Safety-Element_Update_deir

To request to make an appointment to view a hard copy of the Draft EIR, appendices, and/or the project file, please contact Cally Hardy at (213) 978-1643 or housingelement@lacity.org.

Please submit your written comments on the Draft EIR to the following address during the comment period provided below:

City of Los Angeles, Department of City Planning
ATTN: Cally Hardy, City Planning Associate
Case Numbers: CPC-2020-1365-GPA; CPC-2021-5499-GPA; ENV-2020-6762-EIR
200 North Spring Street, Room 750
Los Angeles, CA 90012

Phone: (213) 978-1643
email: housingelement@lacity.com

Comment Period*:* July 22,2021 at 9:00 a.m. to September 7, 2021 at 5:00 p.m.

Any agency, organization or members of the public desiring to comment on the Draft EIR must submit their comments prior to the end of the public comment period.

Final EIR. The Final EIR consists of the Draft EIR; revisions to the Draft EIR; comments on the Draft EIR and responses to comments raising significant environmental concerns by individuals, organizations, and public agencies or other reviewing parties; and a list of persons, agencies, and organizations commenting on the Draft EIR (CEQA Guidelines Section 15132). The City will also include in the Final EIR a Mitigation Monitoring and Program (MMP). According to PRC Section 21081.6, for projects in which significant

impacts would be minimized by mitigation measures, the lead agency must include an MMP. The purpose of an MMP is to ensure compliance with required mitigation measures during implementation of the project. After the Final EIR is completed, and at least 10 days prior to its certification, a copy of the response to comments on the Draft EIR will be provided or made available to all commenting parties.

Per PRC Section 21081(a) and CEQA Guidelines Section 15091, when an EIR identifies significant environmental impacts that may result from a project, the lead agency must make specific Findings of Fact (Findings) before certifying the EIR. Prior to approval of a project, one or more of the following three findings must be made with respect to each significant impact identified in the EIR:

- Changes or alterations have been required in, or incorporated into, the project that avoid or substantially lessen the significant environmental effect as identified in the EIR.
- Such changes or alterations are within the responsibility and jurisdiction of another public agency and not the agency making the finding. Such changes have been adopted by such other agency or can and should be adopted by such other agency.
- Specific economic, legal, social, technological, or other considerations, including provisions of employment opportunities for highly trained workers, make infeasible the mitigation measures or project alternatives identified in the final EIR.

Environmental impacts may not always be mitigated to a less than significant level. When this occurs, impacts are considered significant and unavoidable. To comply with PRC Section 21081(b) and CEQA Guidelines Section 15093, if the City concludes that the project would result in significant and unavoidable impacts, which are identified in the Final EIR, the City must adopt a written "statement of overriding considerations" prior to approving the project. Under CEQA, the City is required to balance the benefits of the project against the significant and unavoidable environmental impacts. Where the City concludes that the economic, legal, social, technological, or other benefits outweigh the unavoidable environmental impacts, the City may find such impacts acceptable and approve the project.

The City must file a NOD after deciding to approve a project for which an EIR is prepared. A local agency must file the NOD with the County Clerk. The NOD 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 challenges.

Table 1-2 NOP Comments and EIR Response

Comment/Request	How and Where Comments are Addressed in this EIR
Introduction	
• EIR scoping process should not be concluded until the public is afforded a reasonable opportunity to review the draft Housing Element Update and provide additional comments concerning the scope of the EIR • No references/comments are made to the required Mitigation, Monitoring, and/or Reporting requirements of the Final EIR. A Draft MMRP should be provided in the Draft EIR in order for the public to focus on such during the development and review of alternatives • Provide definitions of lead agency and all enforcement agencies	See Section 1.5, *Environmental Review Process*, of this EIR for a summary of the process and public noticing procedures.
Proposed Project Scope and Description	
• Provide summaries of State law and City ordinances related to housing • Provide adequate and complete description of Safety Element Update • Provide legal citation for No Net Loss Law	These issues are addressed in Section 3, *Project Description*, of this EIR.
Aesthetics	
• Provide table, map, and examples of existing visual character for sites identified for rezoning • Provide concordance for all updated zoning categories for visual characterization • Provide table, map, and example pictures of existing visual character and quality of view • Analysis should include design measures for shade, awnings, and other structures in the plan including at bus shelters	These comments are noted for the record and have been considered in the City's preparation of Section 4.1, *Aesthetics*, of this EIR, to the extent they are relevant to the environmental analysis, applicable threshold of significance, and/or the requirement to consider feasible mitigation measures and alternatives.
• Significant impacts on scenic vistas and resources may occur in the Pacific Palisades area • Address the potential impact on scenic views and resources from a range of realistic rezoning possibilities/additional housing numbers that may be assigned to Pacific Palisades	Impacts to scenic vistas were determined to be less than significant per Section 1, *Aesthetics*, of the IS-NOP; however, the City has determined it appropriate to analyze impacts to scenic vistas in the EIR to address these comments. These comments are noted for the record and have been considered in the City's preparation of Section 4.1, *Aesthetics*, of this EIR, to the extent they are relevant to the environmental analysis, applicable threshold of significance, and/or the requirement to consider feasible mitigation measures and alternatives.

Comment/Request	How and Where Comments are Addressed in this EIR
• Light and glare should be studied further in EIR	This impact was determined to be less than significant Section 1, *Aesthetics*, of the IS-NOP, and the comment does not provide substantial evidence supporting the need for further analysis in the EIR based on a potential significant impact.
Agriculture and Forestry Resources	
• Provide map and table of parcels designated currently as Prime/not-Prime and Unique/not Unique farmland or agricultural and as open space and provide evaluation as to whether surroundings are developed for residential and commercial uses • Provide annual estimates of agricultural production for parcels above 100,000 square feet in area • Provide specific requirements and constraints for rezoning any agricultural/farmland/open space of more than 45,000 square feet	It was determined that impacts regarding agriculture and forestry resources would be less than significant in Section 2, *Agriculture and Forest Resources*, of the IS-NOP; refer to Appendix A of this EIR. The commenter has not provided substantial evidence to support the need for further analysis in the EIR based on a potential significant impact.
Air Quality	
• SCAQMD recommends use of CEQA Air Quality Handbook and SCAQMD resources for guidance in preparing air quality and greenhouse gas (GHG) analyses; also recommends using CalEEMod for analysis • SCAQMD recommendations for air quality impacts and mitigation measures • Development will have potentially significant impacts on air quality • Development with less parking that encourages the use of mass transit will lead to less air pollution including GHG emissions • Define SCAQMD thresholds and provide numerical basis and modeling for their definitions, assignments, and estimations by air pollutant and respirable particulate • Impacts to air quality can be mitigated by expanding tree foliage, minimizing the removal of trees and investing in nature-based solutions of rain gardens, bioswales, turf removal, stormwater capture, using drought tolerant plants, ground vegetation and planting more fruit trees • Provide numerical model for project level air pollutants/pre-cursors and map for suitable land use zones/locations • Provide an updated review for all Transportation Analysis Zones (TAZ) for impacts on the Air Quality Management Plan	These comments are noted for the record and have been considered in the City's preparation of Section 4.2, *Air Quality*, of this EIR, to the extent they are relevant to the environmental analysis, applicable threshold of significance, and/or the requirement to consider feasible mitigation measures and alternatives.
Biological Resources	
• CDFW requests maps of areas including the City's Significant Ecological Areas (SEA), wildlife corridors, and aquatic and riparian resources • CDFW recommendations for biological impacts, mitigation measures, and alternatives • Need to consider impacts on wildlife and wildlife corridors • Density is an issue that must be analyzed and balanced with the ecosystem services of trees	These comments are noted for the record and have been considered in the City's preparation of Section 4.3, *Biological Resources* of this EIR, to the extent they are relevant to the environmental analysis, applicable threshold of

Comment/Request	How and Where Comments are Addressed in this EIR
• Concerns about removing protected California oak trees • Ensure the protection and enhancement of the urban tree canopy • City's existing tree canopy is already insufficient • A resilient and sustainable tree canopy should be at least 45% to obtain maximum environmental benefits • Existing trees and tree canopy should be analyzed in the EIR, including the effects of tree removal and added housing on existing trees • Tree removal complaints are common throughout the community • Loss of trees on private property is a problem • Preserving existing trees and tree canopy should be a priority • Construction endangers the mature trees on adjacent lots as the construction damages and/or destroys the root systems of otherwise thriving healthy trees • Removal of mature trees cannot be mitigated by planting replacement trees, which often do not survive to maturity or provide the same benefits as the removed tree • Removal of a mature tree can only be mitigated by moving the tree or replacing the tree with one of equal size • Loss of mature trees should require similar replacement ratios (4:1) to the Protected Tree Ordinance requirements for Heritage trees • Replacement trees should be a minimum of 24-inch box size trees with a larger minimum size for large mature tree replacement • Further consideration should be given to mandating replacement with shade trees, preferably not deciduous trees • Palm trees should not be planted as replacement trees since they provide few benefits (e.g., no shade or reduction in GHG emissions) • Request that an EIR must be done whenever mature trees are slated for removal during a development project • Mature trees have cumulative environmental significance and provide a variety of benefits (e.g., habitat for urban wildlife, stormwater management, reduce heat island effect, and improve air quality) • Based on the new building types that have been replacing the prior buildings, City planning has not considered the wildlife and wildlife migration in Elysian Park and Echo Park • City planning should consider the bigger environment when issuing planning entitlements to multi-floor residential projects in the hills of Echo Park, within 2,000 feet from Elysian Park, and on the northern slope of Sunset Boulevard between Beaudry Street and Douglas Street in City District 1 • The Stires Staircase Bungalow Courts in Echo Park is an example of an older housing development that took the environment into account • The 100+ new plantings along Sepulveda and Sunset Boulevards are an example of attempts to enhance the City's parkway trees that are not properly cared for and die • Tree removal information for development is tracked by the Urban Forestry Division, Board of Public Works, and Bureau of Street Services • Data from City tree removal requests is being compiled by Angelenos for Trees and will be available by the time the EIR is in progress • Large disparity of trees in low-income communities • Require native trees and drought-tolerant species for landscaping	significance, and/or the requirement to consider feasible mitigation measures and alternatives.

Comment/Request	How and Where Comments are Addressed in this EIR
• Initial Study ignores the recommendations to conserve 30 percent of State land and coastal water by 2030 • Include consideration of policies already adopted by the City, such as Los Angeles' 2020 Biodiversity Report • According to the USC Dornsife study, the City of Pasadena did not experience the same loss of tree canopy because it encourages tree preservation in its development projects	
Cultural Resources/Tribal Cultural Resources	
• California Native American Heritage Commission (NAHC) recommendations for tribal and cultural resource impacts, including Senate Bill 18 and Assembly Bill 52 requirements and mitigation measures • Every tribe that lives/works in the City should be included in the consultation process • The need to rezone/upzone to allow for greater housing density should not come solely at the expense of historic resources • Historic Preservation Overlay Zones (HPOZ) could be greatly impacted by changes to zoning • Many older, undesignated buildings may be put at risk • Retention and preservation of existing affordable housing and naturally occurring affordable housing (NOAH), including older and historic residences, needs to be prioritized and amplified through concrete strategies • Inclusion of SurveyLA findings on historical resources in an analysis of potential conflicts in the Housing Element Update	These comments are noted for the record and have been considered in the City's preparation of Section 4.4, *Cultural Resources,* and Section 4.15, *Tribal Cultural Resources,* of this EIR, to the extent they are relevant to the environmental analysis, applicable threshold of significance, and/or the requirement to consider feasible mitigation measures and alternatives.
• Informative maps of historic districts, planning districts, and Community Plan Implementation Overlay Districts (CPIO) should be fully incorporated into the Housing Element Update • In the Watts and Southeast Plan, cultural and historic landmarks, including federal historic landmarks, were not placed in a HPOZ • Many of the City's NOAH and Rent Stabilization Ordinance (RSO) units are located within the City's potentially historic parcels • Provide at least a five-part assessment of probability/risk of encountering archeological remains for square mile areas based on State coordinates • Many of the Downtown buildings that remain empty are those that present unique challenges (e.g., small floor plates, ADA accessibility issues, etc.) and are unable to be combined with other buildings or a larger project • Expand Adaptive Reuse and Mills Act application citywide to promote new housing in existing buildings and incentivize the retention and reinvestment in NOAH • Revise the Adaptive Reuse Ordinance to ensure it remains effective as an incentive to encourage the reuse of existing buildings throughout the City • Consider example in Charlotte, North Carolina to retain and reinvest in NOAH • Disadvantaged communities need new community plans or other opportunities to determine how they want to preserve their historic spaces • Encourage the consideration of creative approaches to preserve NOAH that involve both the public and private sectors • Encourage the City to think creatively about how the Mills Act can be applied strategically to support NOAH and ensure greater equity	These comments are noted for the record and have been considered in the City's preparation of Section 4.4, *Cultural Resources,* and Section 4.15, *Tribal Cultural Resources,* of this EIR, to the extent they are relevant to the environmental analysis, applicable threshold of significance, and/or the requirement to consider feasible mitigation measures and alternatives.

Comment/Request	How and Where Comments are Addressed in this EIR
Energy	
• Invest in aging infrastructure, such as microgrids • Electrify newly constructed buildings • Eliminating gas furnaces for heat pumps is another way to keep all appliances electric • Solar rights must be preserved • Solar rooftops must be a requirement for all new construction • Mandate that all new developments and existing public buildings include solar • Provide listing and tables with map and energy requirements for lifting treated water from Hyperion to supply above 300 feet • Include consideration of policies already adopted by the City, such as L.A.'s Green New Deal	Section 6, *Energy*, of the IS-NOP (see Appendix A of this EIR), determined that the proposed project would have a less than significant impact to energy. The commenter has not provided any substantial evidence to support the need for studying Energy impacts in the EIR based on potential impact.
Geology and Soils	
• Provide mapping of potential landslide areas • Provide map of all ZIMAS assigned surface fault, landslide, and liquefaction zones; and provide tables for residential zoning, populations, households, and jobs within surface fault, landslide, and liquefaction zones and with maximum anticipated earthquake • Provide map of all ZIMAS assigned/other assigned surface fault zones and tables for all hospitals, gas/petroleum storage of more than 1,000 gallons of gas/petroleum pipelines, road bridges, tunnels, and fire stations within surface fault zones and with maximum anticipated earthquake, and those within 500 feet of such zones • Provide mitigation for proposed housing located in fault zones	Impacts associated with geologic hazards were determined to be less than significant based on compliance with all State and local development regulations; refer to Section 7, *Geology and Soils*, of the IS-NOP in Appendix A of this EIR and comments did not provide any substantial evidence to support the need for further analysis in the EIR based on a potential significant impact.
Greenhouse Gas Emissions	
• SCAQMD recommendations for GHG impacts and mitigation measures • Development will have potentially significant impacts on GHG emissions • Improved non-car transit options (e.g., DASH and metro services), frequency of service, mobility hubs, and wayfinding will assist in lowering GHG emissions • Impacts of climate change cannot be ignored as they impact increased temperature, reduced precipitation, seal level rise, reduced water supply, wildfire risk, public health impacts of heat and air quality, and coastal erosion • Address what the environmental impact of climate change will be on the ability to meet RHNA targets • Building an excess of housing would create a carbon footprint we cannot afford • Include consideration of policies already adopted by the City, such as L.A.'s Green New Deal and the California Climate Adaptation Planning Guide • Car emissions resulting from gig drivers driving far distances from their homes to West LA to make deliveries and short passenger trips • Cool roofs/cool pavement will be needed to combat the urban heat island effect • For multi-family buildings, have communal electric vehicles that can be shared for residents to run errands	These comments are noted for the record and have been considered in the City's preparation of Section 4.6, *Greenhouse Gas Emissions*, of this EIR, to the extent they are relevant to the environmental analysis, applicable threshold of significance, and/or the requirement to consider feasible mitigation measures and alternatives.

Comment/Request	How and Where Comments are Addressed in this EIR
• For higher-end buildings, have a concierge service with its own delivery personnel who can run errands for the residents • Placing hydration stations near transit stops, especially bus stops and pedestrian corridors, will greatly improve the plan's efforts to increase climate resilience • Electric scooters generate a large amount of e-waste and have a large carbon footprint • Problem with plastic waste in the City due to food takeout/delivery and daily deliveries from Amazon and other big box stores • Mandate reusable pods and that deliveries may only occur once or twice a week	
Hazards and Hazardous Materials	
• Include the environmental impacts of concentrating new housing in areas that are, under existing conditions, disproportionately impacted by environmental hazards (e.g., air pollution and ground toxins) • City must incorporate the goals, objectives, and policies of the Local Hazard Mitigation Program and the Floodplain Management Plan to protect communities from unreasonable risks associated with geologic hazards, flooding, and wildland and urban fires • Revise EIR to include energy and related conditions, methane zone, and rezoning for current and future housing above existing and changing natural gas storage facilities (e.g., Playa Del Rey Gas Storage Facility) • Danger of the Playa del Rey Gas Storage Facility should not be ignored while planning land use • Create buffer zones where toxic industries are in close proximity to livable areas • Oil wells must be properly decommissioned if redevelopment is to occur • Housing should not be built in coastal areas due to sea level rise	These comments are noted for the record and have been considered in the City's preparation of Section 4.7, *Hazards and Hazardous Materials*, of this EIR, to the extent they are relevant to the environmental analysis, applicable threshold of significance, and/or the requirement to consider feasible mitigation measures and alternatives. Also refer to Section 9, *Hazards and Hazardous Materials* of the IS-NOP, and Section 4.17, *Wildfire* of the EIR.
Hydrology and Water Quality	
• Consider and analyze all plans intended to mitigate flood risk • Provide mapping of potential flooding areas • Access to clean, quality water must be taken into consideration • Provide LID for all construction and operations on all identified project sites in the City	These comments are noted for the record and have been considered in the City's preparation of Section 4.8, *Hydrology and Water Quality*, of this EIR and Section 10, *Hydrology and Water Quality*, of the IS-NOP, to the extent they are relevant to the environmental analysis, applicable threshold of significance, and/or the requirement to consider feasible mitigation measures and alternatives.
• Provide requirements of collection, conveyance, storage and reuse for irrigation and/or recharge for a ¾ inch rainfall event over 24 hours • Provide a map and tables of all project sites which may require greater than 10,000-gallon capacities • Require underground cisterns connected to irrigation systems for multifamily developments	These hydrology impacts were scoped out in the initial study. The comments have not provided any substantial evidence to support the need for further

Comment/Request	How and Where Comments are Addressed in this EIR
• Require cisterns under the driveway or backyard of any lot that is being scraped • Mandate rainwater collection	analysis in the EIR based on a potential significant impact.
Land Use and Planning	
• Study potential environmental impacts of an increased zoning capacity of 501,642 housing units • Zoning changes must occur in order to tackle the City's housing crisis and to achieve the City's RHNA target • Provide a map of the areas being considered for rezoning • Study and analyze the impact of converting industrial zoning to mixed use/residential within 0.5 mile of mass transit	These comments are noted for the record and have been considered in the City's preparation of Section 4.9, *Land Use and Planning*, of this EIR, to the extent they are relevant to the environmental analysis, applicable threshold of significance, and/or the requirement to consider feasible mitigation measures and alternatives.
Mineral Resources	
• Revise EIR scope to include mineral resources; to analyze the potential impacts associated with housing within 2,500 feet of idled, active and abandoned-derelict oil wells	As the comments relate to mineral resource impacts, those are discussed in Section 12, *Mineral Resources,* of the IS-NOP, the analysis under CEQA focuses on the loss of availability of mineral resources, which would be less than significant under the proposed project. As the comments related to hazards and hazardous conditions, the comments are noted for the record and have been considered in the City's preparation of Section 4.7, *Hazards and Hazardous Materials*, of this EIR, to the extent they are relevant to the environmental analysis, applicable threshold of significance, and/or the requirement to consider feasible mitigation measures and alternatives.

Comment/Request	How and Where Comments are Addressed in this EIR
Noise	
• Development with less parking that encourages the use of mass transit will lead to less noise pollution	This comment is noted for the record and has been considered for Section 4.10, *Noise*, of the EIR, to the extent they are relevant to the environmental analysis, applicable threshold of significance, and/or the requirement to consider feasible mitigation measures and alternatives.
Population and Housing	
• Ensure that the site inventory does not catalyze displacement • Concerns of an increase in lower-income renter housing displacement • Provide more details on the Safety Element Update appropriate to the increased population and household, environmental justice, and safety issues • Provide current SCAG population projections used in all current Community Plans that have passed scoping and compare them to RHNA population • Provide current project 2030, 2040, and 2045 populations, households, and jobs by CPA and comparisons with RHNA population, households, and job allocations to community plans • Provide comparison of all existing specific plan areas for residential portions and their current and projected housing units without update modifications and those likely with housing update condition modifications proposed for lands within 1,000 ft of specific plan boundaries • Provide projected population, households, jobs, and current/projected area capacities by zip codes and for accumulative CPAs • Provide alternative for completion of development for all currently zoned residential properties and for all parcels of >6,000 sf with existing family dwelling and suitable 1,000 sf ADU • Provide for suitable transitions for all TOCs with COM or R-5 immediately adjacent to the transit route, with R-4 of 100+ foot zone, then R-3 of 100+ foot zone, and R-2 of 100+ foot zone between the transit route and R-1 zone parcels • Provide the projections for 2029 and 2048 by project areas for populations, households, and jobs; and provide comparison of households from 2000-2020 projections to demonstrate result of projections and project occupancies • Provide model to identify specific areas that could be subject to temporary displacements along with offsets within a three-year period • Provide maps and tables of current and past displacements and their significance	These comments are noted for the record and have been considered in the City's preparation of Section 4.11, *Population and Housing* of this EIR, to the extent they are relevant to the environmental analysis, applicable threshold of significance, and/or the requirement to consider feasible mitigation measures and alternatives.

Comment/Request	How and Where Comments are Addressed in this EIR
Public Services	
• Address the potential impact of the project upon providing fire protection services in the flatlands and VHFHSZ, particularly if the increase in housing units outpaces the ability of the City to expand fire services • Address the potential impact of the project upon providing police services should the increase in housing units outpace the ability of the City to expand police services • As part of the analysis of the impact of increased density on public schools, the EIR should address specific differences within the City (e.g., schools with enrollment under capacity vs. schools at capacity, or over-enrolled) • Address the status of local infrastructure and public services to support additional people and residences in each community plan • Provide facilities and infrastructure for survival following an earthquake and designate evacuation routes • Analyze the impact densification has on crime incident • Concern that additional housing will result in overcrowding at schools in Westwood South	These comments are noted for the record and have been considered in the City's preparation of Section 4.12, *Public Services* of this EIR, to the extent they are relevant to the environmental analysis, applicable threshold of significance, and or the requirement to consider feasible mitigation measures and alternatives.
Recreation	
• Additional mitigation measures should be implemented to provide land and/or onsite amenities open to the larger community to offset some impacts • Creation of additional open spaces is needed throughout the City, including in park poor communities • Although there are two primary parks located within the Westside Neighborhood Council boundaries, these resources are not sufficient for the population in the area and the increased housing potential in the TOC zoning along with other upzoning that may occur. This issue needs to be analyzed thoroughly in the EIR. • In the impact analysis for public parks and recreation, the EIR should address specific differences within the City by each of the different CPAs • Development impact fees have not historically proven to provide sufficient resources in the City to offset loss of park and open space and/or to increase these resources • Small lot developments with less than 19 units must provide minimal recreational area for children • Disadvantaged communities need new community plans or other opportunities to determine where they need green spaces • Long-range maintenance and upkeep of parkland must be considered as part of impacts of added housing and population density • There are deficient ratios of park acreage per 1,000 persons throughout the City including in West LA • In the Watts and Southeast Plan areas marked on Navigate LA as public facilities/open space are only designated as public facilities, making them vulnerable to future housing development • There are no parks within the West of Westwood Homeowners Association boundary • The nearby Palms Park is not sufficient for the population in the West of Westwood Homeowners Association area and the increased housing potential in the TOC zoning along with upzoning that may occur	These comments are noted for the record and have been considered in the City's preparation of Section 4.13, *Recreation,* of this EIR, to the extent they are relevant to the environmental analysis, applicable threshold of significance, and/or the requirement to consider feasible mitigation measures and alternatives.

Comment/Request	How and Where Comments are Addressed in this EIR
• Smaller parks are essential and community gardens where residents can grow their own food should be encouraged • Provide current compliance and adequacy for current and projected indoor/outdoor recreational service demands • Provide comparison of 2012-2021 and proposed 2021-2029 plans for recreational services and infrastructure funding	
Transportation	
• Caltrans recommendations regarding vehicle miles traveled (VMT) analysis to be completed • Concerns regarding emergency access • Analyze the potential traffic impacts the project will have upon areas within the Rezoning Program • Identify and address neighborhoods that are already unable to accommodate their existing density, i.e., with already established unacceptable service level burdens on roadways • Transportation issues need to be carefully evaluated as to their impacts with requirements for additional housing capacity based upon existing upzoning (TOC) and any potential future upzoning that could occur through the West LA Community Plan update or by the City in response to proposed future rezoning to implement the Housing Element policies and goals • Analyze the environmental impact of increased residential density on transportation level of service within a 0.5-mile radius of such impacted roads and intersections • There can be a reduction in VMT while still resulting in an increase in congestion from added construction/density, which must not be ignored, particularly in key locations where congestion might have a negative impact on access to transit • Discuss the local and regionwide environmental impacts of failing to allocate new housing to areas that are in proximity to job centers or well served by public transit • Many of the City's working-class residents work at jobs that are far from transit • Many of the residential neighborhoods along the Exposition Light Rail Corridor have experienced reduced ingress/egress as a result of the implementation of traffic measures and increased cut-through traffic • Provide numerical basis, maps and tables for more equitable distribution by TAZ s for transit corridors, stations, job centers, services/amenities, and higher/ medium/ low resources areas • Provide current and projected SCAG growth by TAZ for population, households, jobs, education and incomes; and provide balances of jobs and pathways for employees between TAZs, including a cumulative impact analysis • Provide maps of all Major Transit Stops and current land uses and zoning within 2,700 feet • Provide maps and tables of the Inventory of Sites and projected jobs, populations, households and employee travels between residences and job sites by SCAG-TAZs • Evaluate the practice of the Building Department to waive street dedication requirements with housing and mixed-use development projects that sometimes result in maintaining streets that are substandard in roadway	These comments are noted for the record and have been considered in the City's preparation of Section 4.14, *Transportation,* of this EIR, to the extent they are relevant to the environmental analysis, applicable threshold of significance, and/or the requirement to consider feasible mitigation measures and alternatives. In addition, as stated in Section 4.10, *Transportation*, based on Senate Bill 743, the transportation impact analysis was prepared pursuant to LADOT's Transportation Assessment Guidelines (July 2020) which establish the guidelines and methodology for assessing transportation impacts for projects based on the updated CEQA guidelines from the State of California that require transportation impacts be evaluated based on VMT rather than level of service (LOS) or any other measure of a project's effect on automobile delay.

Comment/Request	How and Where Comments are Addressed in this EIR
width, which limits emergency access and can create safety hazards and traffic bottlenecks • Public transit in West LA is inadequate • Gig workers are contributing to street congestion throughout the City as they look for business • Construct more rail services • Provide protected bike lanes for electric scooters/last mile solutions • Provide dynamic congestion pricing (toll lanes) on roads • Create an equitable, transformative City parking permit program • Require permit parking in all residential neighborhoods • City should revoke Council File 18-0244, which increases the DASH interval to 15 minutes • TOC developments impact the parking of surrounding neighborhoods • Oppose allowing residents of new TOC developments to participate in the street parking permit program by Los Angeles Department of Transportation • Housing Element Update disregards safety in Brentwood, which includes traffic intersections with a D or F rating and no room for road improvement	
Utilities and Service Systems	
• Analyze to what degree the project will increase the demand of water, roads, schools, power and other utilities, sewage treatment, and infrastructure • Analyze the environmental impact if the City is unable for financial or other reason to upgrade infrastructure to accommodate increased density • Concerns with impacts to water and wastewater • Compare the commercial grade infrastructure located in industrial zones to infrastructure capacity in residential zones for purposes of identifying additional potential property for the allocation of RHNA units and rezoning • Take into consideration the substantial differences that presently exist in infrastructure capacity, such as North CD11, which experiences regular water main breaks and power outages • There are currently not enough resources (e.g., water, electricity, schools, firefighters, and police) for residents in West LA • There are already areas in the City and Westwood South community where there are clear indications of an insufficient capacity to serve existing population density • Brentwood Glen does not have the roads, power, sewer, schools, and other infrastructure to support the 90049 allocated units • In an EIR for a large nearby housing development, it was mentioned that the project would likely use up all the remaining sewage capacity in the area, which raises concerns for sewage capacity • Added density will bring additional demands for water resources that may not exist locally, regionally or even statewide • As part of the analysis of the impact on utilities and service systems, the EIR should analyze the impact of increased density on the infrastructure within each separate community plan • Any new market-rate development should be mandated to build rainwater storage and pumps to irrigate drought-tolerant landscaping	These comments are noted for the record and have been considered in the City's preparation of Section 4.16, *Utilities and Service Systems*, of this EIR, to the extent they are relevant to the environmental analysis, applicable threshold of significance, and/or the requirement to consider feasible mitigation measures and alternatives.

Comment/Request	How and Where Comments are Addressed in this EIR
• Allowing developers to decide where added density is to be built without having an adequate and up-to-date assessment of infrastructure capacity/capability is a recipe for disaster	
Wildfire	
• City must review wildfire impacts under the revised CEQA Guidelines, which now require analysis of a project's environmental impacts based on location in a wildfire hazard area • Initial Study fails to recognize that development in Very High Fire Hazard Severity Zones (VHFHSZ) implicates global warming concerns • Analyze and provide a study of the impacts of adding 419,261 to 429,261 units in areas with special environmental considerations, such as areas located near open space, hillside areas, VHFHSZ, or coastal zones • Address the potential impacts development has on the community and environment in VHFHSZ, particularly in hillside communities • Analyze impacts of densification in VHFHSZ in the EIR • Study and analyze how, and to what extent, any proposed rezoning will impact fire and evacuation risks in VHFHSZ • Significant impacts on emergency evacuation and risk of loss, injury or death involving wildland fires may occur and should be analyzed in the EIR • Continued expansion into the City's wildland urban interface should be analyzed to assess the appropriate land use policy and building codes required to mitigate potential wildfire risk • Councilmember Mike Bonin requests a wildfire study in the Draft EIR due to concern of the potential to increase the City's vulnerability to natural disasters in VHFHSZ • If any development or upzoning is a possibility in VHFHSZ, the EIR should analyze the type and amount of development that might significantly impact the human lives, property, or biological resources in all such VHFHSZ Address the potential impacts involving wildland fires, and the potential impact on emergency evacuation and exposure to risk of loss, injury or death involving wildland fires from a range of realistic rezoning possibilities/additional required housing numbers that may be assigned to Pacific Palisades • The Housing Element Update recklessly maps VHFHSZ as "High Opportunity Areas" and fails to explain why they are designated as "High Opportunity Areas"	Based on the comments received during the scoping period, Section 4.17, *Wildfire,* has been added to this EIR which will further analyze the impacts discussed in Section 20, *Wildfire*, of the IS-NOP. The comments have been considered in the preparation of Section 4.17 to the extent they are relevant to the environmental analysis, applicable threshold of significance, and/or the requirement to consider feasible mitigation measures and alternatives.
• Specify whether the Housing Element Update would allow rezoning and provide development incentives in fire-prone hillsides areas • Consider restrictions on hillside development due to enhanced wildfire risk • Analyze whether increased units will have an impact and be in conflict with areas designated VHFHSZ in 90049 • Concern that more infrastructure (additional roads or power lines/other utilities) would be required for additional housing, which may exacerbate fire risk, impact the environment, or expose people or structures to other risks • Unsafe to increase housing density or upzone in areas designated VHFHSZ • If new development in VHFHSZ occur, evacuation studies and roadway capacity analyses must be required before any new development is approved	These comments are noted for the record and have been considered in the City's preparation of Section 4.17, *Wildfire*, of this EIR, to the extent they are relevant to the environmental analysis, applicable threshold of significance, and/or the requirement to consider feasible mitigation measures and alternatives.

Comment/Request	How and Where Comments are Addressed in this EIR
• If housing is placed in VHFHSZ, mitigation is needed to address issues with road widths and quality of roads, wildland interface areas, evacuation/ingress/egress, lack of sidewalks, increased human ignition sources, construction risk, and lack of fire insurance underwriting sufficient to cover property value • Analyze and describe whether the project should specifically state that no "Opportunity Sites" are appropriate in VHFHSZ, or in the event that the project does not exclude "Opportunity Sites" in VHFHSZ, a wildfire study should be done • Statements on pgs. 141 – 144 of the Initial Study imply that upzoning and the allocation of sites inventory will not occur in HFHSZ • Development in hillside areas directly conflicts with the State and City's climate goals, increases the risk of wildfires, and decreases the open space necessary to sustain biodiversity and allow wildlife and wildlife corridors and habitat to flourish • Many hillside roads are substandard with limited ingress and egress making it difficult for those escaping a wildfire event to get out, and emergency vehicles that fight fires to get in concurrently • Additional housing could exacerbate traffic and safety conditions during future evacuations in Pacific Palisades • Emergency evacuation plans are not always appropriately implemented • Current Housing Element selected parcels for upzoning that burned in the Getty Fire • California faces the dangerous new reality of a year-round fire "season" and environmental conditions that make the consequences of wildfires greater than ever before • Analyze, incorporate, and implement the LA City Council File No. 20-1213 report, amendments, and goals for climate adaptation and resilience into the project • If areas designated VHFHSZ in 90049 are excluded, the total number of units should be reduced due to impacts in the Brentwood Glen and South Brentwood areas • Pacific Palisades opposes increased housing density due to being located in a VHFHSZ and public safety concerns • Any new market-rate development must be required to underground power lines for the entire block, and developers should not be able to pay or get a waiver • City should incorporate expert recommendations in the updated Housing and Safety Elements to institute home-hardening policies to reduce the flammability of existing communities and prohibit new development in VHFHSZ • Explain the apparent inconsistencies between State laws and the General Plan with respect to housing objectives and the safety of lives and property in VHFHSZ	

Comment/Request	How and Where Comments are Addressed in this EIR
Alternatives	
• Provide a clear definition and descriptions of alternatives, and their goals, objectives, policies, and plans for each as currently known • Provide references regarding any numerical comparisons of alternatives • Need to preserve trees as an alternative to removal and replacement by smaller trees • Project focused alternative with all housing projections limited to sites within 500 feet of existing transit routes and eliminate all zoned-designation as residential parcels that have not been constructed/permitted within 20 years of their residential zoning • Include an alternative or explanation of the housing need in the City based on a jobs-to-housing ratio of 1.5 after estimating job growth by 2030 • Propose an alternative that does not include a double counting of projected housing need from SB 828	These comments are noted for the record and have been considered in the City's preparation of Section 6, *Alternatives,* of this EIR, to the extent they are relevant to the CEQA requirements to consider alternatives.
Other Issues	
• Provide definitions for commonly used words and phrases throughout the document, such as "reasonably" foreseeable, and higher resourced areas • Define and thoroughly explain the criteria for a Transit Priority Area (TPA), a major job center, and a higher resource area	Definitions for commonly used words and phrases are provided throughout the EIR.
• Include consistent capitalization of "project"; provide editorial and legal consistency regarding use of "shall," "must," "sufficient," "accommodate," and general active verb uses • Define "now" and provide consistent usage in the EIR • Provide clarifications as to "impose," "certain sites" • Clarify "would require" vs "shall/must require" • Provide administrative definitions and differences of "must" and "is required" • Provide clear designation of "jurisdiction," assuming City of Los Angeles, Port of LA, LAWA, LA County and California State facilities • Strongly oppose Planning's approach to the Housing Element Update • Concerns about the project rushing to meet the State's deadline without having ample time to consider and analyze the impacts that the COVID-19 pandemic will have on the ways that people live, work, and commute • Recommend the City request HCD approve the Housing Element Update conditionally in order to have additional time to make necessary revisions • As part of this EIR scoping process, the City should undertake to lay out a clear timeline and sequence for the update and eventual implementation of the Housing Element throughout the many diverse neighborhoods that make up the City, including the incorporation of upzoning into each of the 35 Community Plans	These comments are noted for the record and have been considered in the City's preparation of this EIR.

1.6 AREAS OF CONTROVERSY/ISSUES TO BE RESOLVED

Potential areas of controversy and issues to be resolved by the City's decision-makers may include those environmental issue areas where the potential for an unavoidable and significant impact has been identified.

Based on the IS-NOP comment letters (summarized in Table 1-2 and provided in Appendix B of this EIR), the primary issues of concern include the potential impacts associated with wildfires and the loss of urban trees. Additional issues raised include public health and safety concerns, equitable distribution of housing, homelessness, prefabricated houses, and vacation or short-term rentals (e.g., Airbnb). These issues are not environmental issues related to the proposed project and were not addressed further in the EIR. Regarding public health, the project would result in additional housing to alleviate overcrowding, which would help address concerns relating to the spread of a disease, such as COVID-19.

1.7 ORGANIZATION OF THE ENVIRONMENTAL IMPACT REPORT

This EIR is organized into seven sections, as follows:

1. **INTRODUCTION.** This chapter contains an overview of the purpose and focus of the EIR, a discussion of the intended use of this EIR, a description of the organization of the EIR, and a discussion of the public review process and potential areas of controversy.
2. **EXECUTIVE SUMMARY.** This chapter provides a summary of the proposed project's potential environmental impacts that would result from implementation of the proposed project, proposed mitigation measures where applicable, and the level of significance of the impact before and after mitigation.
3. **PROJECT DESCRIPTION.** This chapter describes the proposed project, including project location, existing conditions, environmental setting, project characteristics and objectives, and required approvals.
4. **ENVIRONMENTAL IMPACT ANALYSIS.** This chapter is the primary focus of this EIR. Each environmental issue is considered in a separate section, which contains a discussion of the environmental settings, the regulatory setting, the methodology and the thresholds of significance. Each section also includes the project analyses, mitigation measures, conclusions regarding the level of significance after mitigation, and cumulative impacts for each of the following environmental issues:

    4.0. **Environmental Analysis** – Provides an introduction and overview of the Environmental Impact Analysis chapter, including the analyzed issue areas, anticipated housing types,

approach to mitigation of potential impacts, summary of case studies, and format of the sections in this chapter.

4.1. **Aesthetics** – Potential conflicts with applicable zoning and other regulations governing scenic quality, changes to views, scenic resources, and visual quality

4.2. **Air Quality** – Changes in pollutants affecting air quality

4.3. **Biological Resources** – Impacts on any sensitive wildlife habitats or special species, wildlife corridors, and local policies and ordinances

4.4. **Cultural Resources** – Changes to historic resources and impacts to archaeological resources

4.5. **Geology and Soils** – Changes or impacts to paleontological resources

4.6. **Greenhouse Gas Emissions** – Changes to GHG emissions and conformance to applicable GHG plans, policy, and regulations

4.7. **Hazards and Hazardous Materials** – Changes in the risk of exposure to hazardous materials

4.8. **Hydrology and Water Quality** – Changes to existing drainage patterns that impede or redirect flood flows

4.9. **Land Use and Planning** – Impacts due to a conflict with any land use plan, policy, or regulation

4.10. **Noise** - Changes in noise and vibration levels due to construction, traffic, and proposed uses

4.11. **Population and Housing** – Impacts related to unplanned population growth and the displacement of people or housing

4.12. **Public Services** – Impacts related to the construction of new or expanded public facilities (e.g., fire and police service facilities and schools)

4.13. **Recreation** – Physical deterioration to existing recreational facilities with implementation of the proposed project

4.14. **Transportation** – Impacts based on existing traffic conditions in terms of vehicle trips and VMT, review of emergency access of any potential hazardous design features, and potential conflict with policies related to circulation

4.15. **Tribal Cultural Resources** – Impacts to tribal cultural resources potentially related to one or more Native American tribes

4.16. **Utilities and Service Systems** – Impacts related to the increased need for utilities and infrastructure improvements and the construction of new, expanded, or relocated facilities

4.17. **Wildfire** – Impacts related to increased risks from wildfire including emergency response plans and factors that exacerbate risks

5. **OTHER CEQA CONSIDERATIONS.** This section analyzes the (1) significant irreversible environmental changes that would result from implementation of the proposed project, (2) growth-inducing impacts of the proposed project, and (3) potential secondary effects that could result from implementation of the proposed mitigation measures identified in this EIR.

6. **ALTERNATIVES.** This section analyzes a range of reasonable alternatives to the proposed project in accordance with CEQA Guidelines Section 15126(f).

7. **LIST OF PREPARERS.** This chapter provides the lists the persons and lead agency that were consulted or contributed in the preparation of this EIR.

2 EXECUTIVE SUMMARY

This document is an Environmental Impact Report (EIR) analyzing the environmental effects of the proposed 2021-2029 Housing Element Update and proposed Safety Element Update (inclusive of the technical amendments to the Plan for a Healthy Los Angeles) (hereafter collectively referred to as the "Proposed Project").[1] This section summarizes the characteristics of the Proposed Project, alternatives to the Proposed Project studied in this EIR, and the environmental impacts and mitigation measures associated with the Proposed Project.

2.1 PROJECT SYNOPSIS

Lead Agency Name and Address

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Project Location

The Los Angeles Citywide Housing Element 2021-2029 Update, Safety Element Update, and Rezoning Program (hereafter referred to as the "Housing Element Update" or "Project") will apply to the entire geographic area located within the boundaries of the City of Los Angeles (City), which encompasses 467 square miles.

Project Background

The Housing Element is one of the eight State-mandated elements of the General Plan and identifies the City's housing conditions and needs, establishes the goals, objectives, and policies that are the

[1] The Draft 2021-2029 Housing Element Update is available for review here: https://planning.lacity.org/plans-policies/housing-element-update#draft-plan. The Draft Safety Element Update is available for review here: https://planning.lacity.org/plans-policies/community-plan-update/general-news-item/draft-safety-element-and-plan-healthy-la.

foundation of the City's housing strategy, and provides an array of programs to create sustainable, mixed-income neighborhoods across the City. The law requires local governments to adopt land use plans and regulatory systems that provide opportunities for, and do not unduly constrain, housing development and the update of the Housing Element every eight years. The Housing Element Update will establish new policies, goals, and programs for the City to accommodate the City's required housing needs allocation as determined by the Department of Housing and Community Development (HCD) and the Southern California Association of Governments (SCAG) in the Regional Housing Needs Assessment (RHNA). The Update to the Housing Element is required to be adopted by October 15, 2021 and will be in effect through October 2029.

Under State Housing Element law, the Project is required to identify an inventory of land suitable for residential development ("Opportunity Sites") that can be developed during the eight-year planning period to accommodate the RHNA Allocation by income category ("Sites Inventory"). The City is not required to physically construct the total RHNA Allocation but must demonstrate adequate zoning capacity. The Opportunity Sites are selected based on criteria established in state law regarding the adequacy and suitability of zoning, development standards, and infrastructure capacity needed to accommodate new housing development (GC §65583.2). The number of unit capacity assigned to each Opportunity Site is based on what can be realistically accommodated on each site and must consider impediments to the development of non-vacant sites.

The Safety Element is one of the eight State-mandated elements of the General Plan. The purpose of the update to the Safety Element is to comply with recent State legislation and guidelines (such as Senate Bill 2141, Assembly Bill 162, Senate Bill 99, Assembly Bill 747, Senate Bill 1035 and Senate Bill 379). Targeted amendments will be made to the Safety Element and the Plan for a Healthy Los Angeles to achieve compliance with State, regional and local policies and guidelines and will incorporate data and maps, address vulnerability to climate change; incorporate policies and programs from the City's updates to the Local Hazard Mitigation Plan and the Floodplain Management Plan, as well as partial or full integration of other recent city documents (including Resilient Los Angeles, LA's Green New Deal / 2019 Sustainability Plan, and the Emergency Management Department Emergency Plans and Annexes). 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.

Project Description

This EIR has been prepared to examine the potential environmental effects of the 2021-2029 Housing Element Update and proposed Safety Element Update (including targeted amendments to the Plan for

a Healthy Los Angeles). The following is a summary of the full Project description, which can be found in Section 3, *Project Description*.

The Housing Element Update includes the programs and policies contained in the draft Housing Element that have the potential to result in physical environmental effects, the Inventory of Sites and Rezoning Program needed to demonstrate zoned capacity needed to accommodate the City's RHNA allocation of 456,643 units. The EIR will analyze the construction and operation of 420,327 housing units, which is the full RHNA number of 456,643 housing units minus 36,316 housing units that were already approved but have not been occupied at the time environmental review was started for the Proposed Project. The previously approved units will be analyzed as cumulative projects in this EIR. Analyzing 420,327 units for the Housing Element Update is intended to provide a conservative analysis of the "worst-case" scenario of environmental impacts from future implementation of the 2021-2029 Housing Element.

Construction of these 420,327 housing units may occur anywhere in the City where residential uses are permitted, as described below. While many units are anticipated to be built on the Opportunity Sites required to be identified in the Sites Inventory, it is not reasonable to expect that housing development will occur solely on those Opportunity Sites. Housing may occur on a wide variety of sites, including any site that is currently zoned for residential use; whereas the Opportunity Sites are subject to a number of requirements to demonstrate the suitability and realistic likelihood of development of each site. Housing may also occur on sites that do not currently allow residential uses or multi-family residential uses of adequate density, including sites that will be rezoned in the future under a Housing Element Rezoning Program.

The City has set a target capacity that is 10 percent higher than the RHNA for lower income units, and 15 percent higher than the RHNA for moderate income units. These buffers are based on anticipated need for additional capacity and on anticipated production levels of lower income and moderate income housing units during the planning period.[2] This results in a total target capacity of 486,379 units, including 203,193 units for lower-income households and a 86,355 units for moderate income households.

The Inventory of Adequate Sites for Housing identifies a total development potential of 266,647 units, which is insufficient capacity to accommodate both the RHNA Allocation of 456,643 units and the City's target capacity of 486,379 units. As a result, the Housing Element identifies a shortfall at all income levels and a total rezoning need of 219,732 units, including rezoning to accommodate a shortfall

[2] The sites included on the Inventory of Sites have an anticipated development potential that is lower than the maximum zoned capacity on each site, which creates an additional buffer at the site-level.

of 121,881 lower income units, 72,639 moderate income units, and 25,212 above moderate-income units. As a result, the Rezoning Program must create at least 219,732 units of new capacity by October 2024. The Rezoning Program will likely be accomplished through updates to the City's Community Plans, an update to the City's Density Bonus program, targeted zone changes and zoning ordinances, and updates to specific plans and overlays. The Rezoning Program will prioritize opportunities for rezoning or development incentives in areas that are located in a Transit Priority Area, near major job centers, and in higher resource areas. This Program may also consider rezoning or development incentives in existing lower density residential zones to create opportunities for missing middle housing typologies (up to low-medium residential density) in these areas.

The anticipated 420,327 units may occur in types of development such as multi-family residential, single-family residential, Accessory Dwelling Units (ADUs), mixed use development, and conversion and/or rehabilitation of existing nonresidential, residential, and mixed used structures. Other types of reasonably foreseeable development include single-resident occupancy and affordable housing that may be for families, seniors, residents with special needs or permanent supportive housing. In addition, these units may occur on sites currently zoned for residential use, commercial use which permit residential uses, hybrid industrial uses which permit joint live-work residential uses, non-vacant sites, sites with existing housing units, as well as publicly owned sites, sites designated as having potential historical or environmental significance, and sites that may be rezoned as a result of the Rezoning Program.

While the Housing Element is undergoing a comprehensive update, the update to the Safety Element is limited to targeted amendments to bring the element up to date and ensure consistency with legislative mandates and the other General Plan elements. The 2021 Safety Element Update includes additions to goals, policies, and objectives to better address climate change; integration of updated background information and mapping; and incorporation and update of programs.

New State legislation requires that cities include goals, policies, objectives, and feasible implementation measures that place a greater emphasis on wildfires, flooding, and climate change. As part of the targeted update to the Safety Element, relevant policies from the City's other policy documents that address climate change adaptation and resilience, such as Resilient Los Angeles, and LA's Green New Deal (Sustainability pLAn), will be incorporated into the Safety Element, centralizing information in the City's General Plan and providing a framework for updates to other implementing documents, allocation of resources, and actions required of City staff and collaborating agencies.

To reduce duplication with the existing Safety Element and 2018 Local Hazard Mitigation Plan, the City will replace repetitive descriptions and exhibits within the Safety Element with references to the

2018 Local Hazard Mitigation Plan. Where additional information is required to satisfy State mandates, information will be included in the Safety Element Update, or in the next update to the Local Hazard Mitigation Plan, anticipated to begin in 2022.

The Safety Element Update will incorporate programs from the 1996 Safety Element, the 2018 Local Hazard Mitigation Plan, the 2020 Floodplain Management Plan, Resilient Los Angeles, LA's Green New Deal and other related plans into a revised Chapter 4, Implementation, that includes a table of programs that implement one or more policies.

The update of two or more general plan elements triggers a State requirement to address environmental justice under the provisions of Senate Bill (SB) 1000. Therefore, the City is required to review existing environmental justice policies to ensure compliance with State law and document the review. The Plan for a Healthy Los Angeles, adopted in 2015, is the General Plan Element that contains the majority of the City's environmental justice policies and programs. As part of the Proposed Project, the City will make a targeted amendment to the Plan for a Healthy Los Angeles alongside the Safety Element to clarify that in addition to health, wellness and equity goals and policies, it is the general plan element containing environmental justice goals and policies for the City.

2.2 PROJECT OBJECTIVES

The underlying purpose of the Project is to accommodate the RHNA compliant with State law and consistent with the City's General Plan. The primary objectives of the Project will be to:

- Meet the City's fair share of the regional housing need to accommodate projected population growth and meet existing housing needs within the city
- Increase the availability of affordable housing and the variety of housing options within the city
- Promote concentrated housing growth in High and Very High Resource areas and in areas with good access to jobs, services, and high-quality public transit
- Strengthen the City's goals, policies, objectives and programs that prevent displacement, promote homeless prevention and diversion, and promote housing stability
- Strengthen the City's goals, policies, objectives and programs that reduce greenhouse gas emissions and promote climate resiliency
- Update the City's Safety and Health Elements to be consistent with current State regulations

2.3 SUMMARY OF ALTERNATIVES

As required by Section 15126.6 of the CEQA Guidelines, a range of reasonable alternatives to the Proposed Project that would attain most of the basic project objectives, but would avoid or substantially lessen any of its significant environmental effects must be examined. Project alternatives aim to identify and disclose ways to mitigate or avoid significant environmental effects that may result from the Proposed Project. Impacts found to be significant and unavoidable in Section 4, *Environmental Analysis,* include:

- **Air Quality –** Threshold 4.2-2 (Construction and Operational Air Criteria Air Pollutant Emissions: Project and Cumulative)
- **Biological Resources –** Threshold 4.3-1 (Special-Status Species: Project and Cumulative); Threshold 4.3-2 (Sensitive Habitats: Project and Cumulative); Threshold 4.3-3 (Wildlife Corridors: Project and Cumulative)
- **Cultural Resources –** Threshold 4.4-1 (Historic Resources: Project and Cumulative); Threshold 4.4-2 (Archaeological Resources: Project and Cumulative)
- **Geology and Soils –** Threshold 4.5-1 (Paleontological Resources: Project and Cumulative)
- **Hazards and Hazardous Materials –** Threshold 4.7-2 (Hazardous Materials Near Schools: Project and Cumulative); Threshold 4.7-3 (Hazardous Materials Sites: Project and Cumulative)
- **Noise –** Threshold 4.10-1 (Construction Noise: Project and Cumulative); Threshold 4.10-2 (Operation Noise: Project and Cumulative); Threshold 4.10-3 (Construction Vibration: Project and Cumulative)
- **Public Services –** Threshold 4.12-1 (Fire Protection: Project); Threshold 4.12-2 (Police Protection: Project); Threshold 4.12-3 (School Facilities: Project)
- **Recreation –** Threshold 4.13-1 (Deterioration of Recreational Facilities: Project and Cumulative); Threshold 4.13-2 and Threshold 4.13-3 (Construction of Recreational Facilities: Project and Cumulative)
- **Transportation** – Threshold 4.14-3 (Highway Safety Resulting from Design Features or Incompatible Uses: Project and Cumulative)
- **Tribal Cultural Resources –** Threshold 4.15-1 (Construction: Ground Disturbance during Construction: Project and Cumulative)
- **Wildfire –** Threshold 4.17-1 (Impair Emergency Response Plan: Project and Cumulative), Threshold 4.17-2 (Exacerbate Wildfire Risks in State Responsibility Area or VHFHSZ: Project and Cumulative), Threshold 4.17-3 (Require Infrastructure that may Exacerbate Fire Risk: Project and

Cumulative), Threshold 4.17-4 (Expose People or Structures to Significant Risks in State Responsibility Area or VHFHSZ: Project and Cumulative), Threshold 4.17-5 (Expose People or Structures to Significant Risks Involving Wildland Fires: Project and Cumulative)

Impacts found to be potentially significant but able to be reduced to less than significant with the imposition of proposed mitigation include:

- **Air Quality –** (Construction TACs)
- **Hydrology –** (Impeding or Redirect Flood Flows)
- **Transportation –** (Conflict with Circulation Plan, Policy, Ordinance; VMT; Construction Hazard due to Geometric Design; Emergency Access)

The alternatives considered are summarized below. Project alternatives are further discussed in Section 6, *Alternatives.*

- **Alternative 1: No Project.** Alternative 1 involves continued implementation of the 2013-2021 Housing Element. Under this alternative the current Housing Element policies would continue to apply and no change in land use or zoning designations to accommodate the 6th cycle RHNA would occur. Alternative 1 would be expected to accommodate fewer new housing units than would the Proposed Project and thus would have commensurately less overall impact with respect to such issues as construction air quality impacts and construction noise. Nevertheless, all the significant and unavoidable impacts associated with the Proposed Project would also occur under the No Project Alternative. These include impacts related to air quality, biological resources, cultural resources, geology and soils (specifically paleontological resources), hazards, public services, tribal cultural resources, construction noise and vibration, recreation, and wildland fire. This alternative would also have a significant and unavoidable impact related to land use, transportation (VMT), and greenhouse gas (GHG) emissions.
- **Alternative 2: Redistribution of Rezoning Program.** To address the Proposed Project's significant and unavoidable impacts related to historical resources, paleontological resources, and hazardous materials, Alternative 2 would redistribute rezone sites under the Rezoning Program to eliminate areas with high concentrations of historic resources, areas of high paleontological sensitivity, and industrial areas where there is relatively high potential for contaminated soil. Alternative 2 would accommodate the same amount of housing development as the Proposed Project, but growth would be greater in some areas (e.g., San Fernando Valley, portions of West and South Los Angeles) and lower in other areas (e.g., Downtown, Hollywood, San Pedro). This would reduce the potential for impacts in some issue areas (notably, historical resources, paleontological resources, and hazardous materials) and increase impacts related to other issue areas (notably,

transportation, air quality, land use, and GHG emissions). As with the Proposed Project, unavoidable significant impacts under Alternative 2 would still occur with respect to air quality, biological resources, cultural resources, geology and soils (specifically paleontological resources), construction noise and vibration, recreation, hazards, public services, tribal cultural resources, and wildfire. This alternative would also have a significant and unavoidable impact related to transportation (VMT), GHG, and land use (inconsistency with SCS/RTP and Framework Element).

As shown in Table 2-1, neither of the studied alternatives would avoid any of the significant and unavoidable impacts of the Proposed Project and both would also result in a significant and unavoidable impact related to GHG, land use, and transportation (VMT) that would not occur under the Proposed Project.

Table 2-1 Impact Comparison of Alternatives

Issue	Proposed Project	Alternative 1: No Project	Alternative 2: Redistribution of Rezoning Program
Aesthetics	LS	**+ (LS)**	=
Air Quality	SU	**+ (SU)**	**- (SU)**
Biological Resources	SU	**- (SU)**	=
Cultural Resources	SU	**+ (SU)**	**+ (SU)**
Geology and Soils	SU	**+ (SU)**	**+ (SU)**
Greenhouse Gas Emissions	LS	**- (SU)**	**- (SU)**
Hazards and Hazardous Material	SU	**+ (SU)**	**+ (SU)**
Hydrology and Water Quality	LTSM	=	=
Land Use and Planning	LS	**- (SU)**	**- (SU)**
Noise	SU	**+ (SU)**	=
Population and Housing	LS	**- (LS)**	=
Public Services	SU	=	=
Recreation	SU	=	=
Transportation	SU	**- (SU)**	**- (SU)**
Tribal Cultural Resources	SU	**+ (SU)**	=
Utilities	LS	=	=
Wildfire	SU	**- (SU)**	=

LS: less than significant impact
LTSM: less than significant impact with mitigation incorporated
SU: significant and unavoidable
=: Similar level of impact to the proposed project
+: Superior to the proposed project (reduced level of impact)
-: Inferior to the proposed project (increased level of impact)

Based on the above, the environmentally superior alternative was identified as the Proposed Project.

2.4 AREAS OF CONTROVERSY/ISSUES TO BE RESOLVED

Potential areas of controversy and issues to be resolved by the City's decision-makers may include those environmental issue areas where the potential for an unavoidable and significant impact has been identified.

Based on the IS-NOP comment letters (summarized in Table 1-1 and provided in Appendix B of this EIR), the primary issues of concern include the potential impacts associated with wildfires and the loss of urban trees. Additional issues raised include public health and safety concerns, equitable distribution of housing, homelessness, prefabricated houses, and vacation or short-term rentals (e.g., Airbnb). To the extent these issues raised social and economic concerns and not environmental issues related to the Proposed Project they were not addressed further in the EIR. Regarding public health, the Project would result in additional housing to alleviate overcrowding, which would help address concerns relating to the spread of a disease, such as COVID-19.

2.5 CLASSIFICATION OF ENVIRONMENTAL IMPACTS

The following environmental impact categories are analyzed in this EIR:

- **Aesthetics –** Changes to scenic vistas and consistency with applicable scenic quality regulations.
- **Air Quality –** Consistency with applicable air quality plan, changes in cumulative pollutant emissions, and sensitive receptor exposure.
- **Biological Resources –** Consistency with applicable local policies and ordinances, and impacts to special status species and special species habitat, riparian habitat and sensitive natural community, and migratory wildlife.
- **Cultural Resources –** Impacts to historical resources and archaeological resources.
- **Geology and Soils –** Impacts to paleontological resources.
- **Greenhouse Gas Emissions –** Generation of GHG emissions, and consistency with applicable plans, policy, and regulations related to climate change and GHG emissions.
- **Hydrology and Water Quality –** Redirecting or impeding flood flows.
- **Hazards and Hazardous Materials –** Changes in risk or exposure to hazardous materials, emissions of hazardous emissions within one-quarter mile of a school, creation of a hazard by locating a project on a known hazardous sites, and exposure of people or structures to wildland fires (analyzed in Section 4.17, *Wildfire*).
- **Land Use Planning –** Consistency with applicable land use plans and policies.

- **Noise –** Changes in noise and vibration levels due to construction, traffic, and operation of future development, and impacts near airports.
- **Population and Housing –** Changes in population and impacts related to growth inducing effects, and the displacement of housing units or persons.
- **Public Services –** Impacts related to the construction or expansion of public facilities (i.e. police protection, fire protection, and schools) from demand created by the Proposed Project.
- **Recreation –** Impacts related to the construction, expansion, or deterioration of recreational facilities.
- **Transportation –** Consistency with applicable plans and policy related to circulation, impacts related to vehicle miles travelled metric, hazards, and emergency access.
- **Tribal Cultural Resources –** Impacts to tribal cultural resources.
- **Utilities and Services Systems –** Consistency with applicable regulations and goals, and impacts related to the construction of new or expanded facilities (i.e., wastewater treatment, drainage, water, electric power, natural gas, and telecommunications) and adequate water supply and water treatment capacity.
- **Wildfire –** Impacts related to emergency response/evacuation plans, exacerbation of wildfire risks, and exposure to risk, loss, injury, or death.

2.6 SUMMARY OF PROJECT IMPACTS AND MITIGATION MEASURES

Table 2-2 summarizes the environmental impacts of the Proposed Project, proposed mitigation measures, and residual impacts (the impact after application of mitigation, if required). Impacts are categorized as follows:

- **Significant and Unavoidable –** An impact that cannot be reduced to below the threshold level given reasonably available and feasible mitigation measures. Such an impact requires a Statement of Overriding Considerations to be issued if the project is approved per §15093 of the CEQA Guidelines.
- **Less than Significant with Mitigation Incorporated –** An impact that can be reduced to below the threshold level given reasonably available and feasible mitigation measures. Such an impact requires findings under §15091 of the CEQA Guidelines.
- **Less than Significant –** An impact that may be adverse, but does not exceed the threshold levels and does not require mitigation measures.
- **No Impact –** The Proposed Project would have no effect on environmental conditions or would reduce existing environmental problems or hazards.

Table 2-2 Summary of Environmental Impacts, Mitigation Measures, and Residual Impacts

Impact Category	Checklist Threshold	Level of Impact Before Mitigation	Mitigation Measure	Level of Impact After Mitigation [3]
Aesthetics				
Scenic Vistas	**Impact 4.1-1:** Would the Housing Element Update have a substantial adverse effect on a scenic vista?	**Housing Element Update:** Less than significant	No mitigation required.	**Housing Element Update:** Less than significant
Scenic Quality Zoning and Regulations	**Impact 4.1-2:** Would the housing development accommodated by the Housing Element Update conflict with applicable zoning and other regulations governing scenic quality; or would any Housing Element Update, Rezoning Program or other Code or plan amendment substantially degrade the visual character or quality of the project area?	**Housing Element Update:** Less than significant	No mitigation required.	**Housing Element Update:** Less than significant
Air Quality				
Air Quality Plan	**Impact 4.2-1:** Would the Housing Element Update conflict with or obstruct implementation of the applicable air quality plan?	**Housing Element Update:** Less than significant	No mitigation required.	**Housing Element Update:** Less than significant
Cumulative Increase	**Impact 4.2-2:** Would the Housing Element Update 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?	**Housing Element Update:** Potentially significant	**4.2-2(a) Construction Emissions Reduction** For discretionary projects, prior to issuance of a permit to construct and at the expense of the project applicant, the City shall retain a qualified air quality analyst to prepare an Air Quality Impact Analysis to analyze construction emissions for any discretionary project that would include either: demolition of more 13,500 square feet of building area; greater than 5,000 cubic yards of soil cut/fill; greater than 5-acres of graded area; or use of more than ten pieces of heavy-duty construction equipment and 150 truck trips on any given day during demolition, site clearing, or grading. The air quality analysis shall demonstrate that project emissions are less than applicable SCAQMD regional and LST thresholds, and as applicable may include, but is not limited to, the following mitigation: • Off-road diesel-powered construction equipment greater than 50 horsepower shall be certified for either the Tier 4 Final emission standards for CARB In-Use Off-Road Diesel-Fueled Fleets Regulations or the USEPA Tier 4 emission standards, where available. In the event that Tier 4 engines are not available for any off-road equipment larger than 100 horsepower, that equipment shall be equipped with a Tier 3 engine or an engine that is equipped with retrofit controls to reduce exhaust emissions of NO_x and DPM to no more than Tier 3 levels unless certified by engine manufacturers or the onsite air quality construction mitigation manager that the use of such devices is not practical for specific engine types. • All construction equipment shall be outfitted with BACT devices certified by CARB. Any emissions control device used by the contractor shall achieve emissions reductions that are no less than what could be achieved by a Level 3 diesel emissions control strategy for a similarly sized engine as defined by CARB regulations. • Vehicle idling shall be limited to five minutes as set forth in the California Code of Regulations, Title 13. Signs shall be posted in areas where they will be seen by vehicle operators stating idling time limits. • Construction contractors shall utilize construction equipment that uses low polluting fuels (i.e., compressed natural gas, liquid petroleum gas, and unleaded gasoline) to the extent that they are available and feasible to use. • Heavy duty diesel-fueled equipment shall use low NO_x diesel fuel to the extent that it is available and feasible to use. • Construction haul truck operators for demolition debris and import/export of soil shall use trucks that meet the California Air Resources Board's (CARB) 2010 engine emissions standards at 0.01 grams per brake horsepower-hour of PM and 0.20 grams per brake horsepower-hour of NO_x emissions. Operators shall maintain records of all trucks associated with project construction to document that each truck used meets these emission standards and shall make these records available for inspection upon request by the City of Los Angeles or the South Coast Air Quality Management District (SCAQMD).	**Housing Element Update:** Significant and unavoidable for operational and construction **Cumulative:** Significant and unavoidable

[3] The *Level of Impact after Mitigation* column includes only the cumulative impacts that are found to be significant and unavoidable.

Impact Category	Checklist Threshold	Level of Impact Before Mitigation	Mitigation Measure	Level of Impact After Mitigation [3]

			• Construction contractors shall use electricity from power poles rather than temporary gasoline or diesel powered generators, as feasible, or solar where available.
			• Consistent with SCAQMD Rule 403, construction contractors shall identify and implement best available dust control measures during active construction operations capable of generating dust.
			• Construction contractors shall maintain construction equipment in good, properly tuned operating condition, as specified by the manufacturer, to minimize exhaust emissions. Documentation demonstrating that the equipment has been maintained in accordance with the manufacturer's specifications shall be kept on-site and made available to LADBS inspectors during inspection.
			• Construction contractors shall reroute construction trucks away from congested streets or sensitive receptor areas, as feasible.
			4.2-2(b) Operations Emissions Reduction
			For discretionary projects, prior to issuance of a permit to construct and at the expense of the project applicant, the City shall retain a qualified air quality analyst to prepare an Air Quality Impact Analysis to analyze operational emissions for any discretionary project that would include more than 462 single-family residential units, 612 multi-family residential units, or any equivalent combination thereof. The air quality analysis shall demonstrate that project emissions are less than applicable SCAQMD regional and LST thresholds, and as applicable may include, but is not limited to, the following mitigation:
			• Implementation of a Transportation Demand Management Plan.
			  ○ Installation of additional electric vehicle charging stations
			  ○ Public infrastructure improvements (e.g., bus stop shelter improvements)
			  ○ Carpool or ridesharing programs
			  ○ Subsidized transit costs
			  ○ Unbundled parking costs
			  ○ Bicycle amenities (storage, showers, lockers, etc.)
			• Use of all-electric appliances (i.e. elimination of natural gas service)
			• Use solar or low emission water heaters that exceed Title 24 requirements
			• Increased walls and attic insulation beyond Title 24 requirements
			• Required use of electric lawnmowers, leaf-blowers, and chainsaws	

Sensitive Receptors	**Impact 4.2-3:** Would the Housing Element Update expose sensitive receptors to substantial pollutant concentrations?	**Housing Element Update:** *Construction related TACs –* Potentially significant *All other substantial pollutant concentrations –* Less than significant	**4.2-3 Construction TAC Reduction Measures** For discretionary projects with an anticipated construction duration of greater than 18-months and located within 500 feet of a residence or other sensitive receptor, prior to issuance of a permit to construct, the applicant shall provide to the City an Air Quality Impact Analysis, prepared by a qualified air quality analyst, that includes a construction health risk assessment. If the analysis shows incremental cancer risk would exceed 10 persons in one million at a sensitive receptor or the calculated Hazard Index for chronic or acute risks would exceed a value of 1.0 at a sensitive receptor, the air quality analyst shall prepare a mitigation plan subject to City review and approval that reduce TACs to less than SCAQMD thresholds. The applicant shall comply with all mitigation measures in the mitigation plan. Alternatively, no Air Quality Impact Analysis and mitigation plan shall be required for discretionary projects conditioned to use construction equipment that meets the CARB Tier 4 Final or USEPA Tier 4 off-road emissions for all equipment rated 50 horsepower or greater. A copy of each unit's certified tier specification or model year specification and CARB or SCAQMD operating permit (if applicable) shall be available upon request at the time of mobilization of each applicable unit of equipment.	**Housing Element Update:** *Construction related TACs –* Less than significant with mitigation *All other substantial pollutant concentrations –* Less than significant
Biological Resources				
Special Status Species Habitat	**Impact 4.3-1:** Would the Proposed 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 Wildlife or U.S. Fish and Wildlife Service?	**Housing Element Update:** Potentially significant **Safety Element Update:** Less than significant	**4.3-1(a) Biological Resources Reconnaissance Survey and Reporting** For all discretionary projects that require vegetation removal, ground disturbance, staging of vehicles, equipment, or materials, and access routes of on natural (e.g., native, virgin) or disturbed (e.g., unpaved, areas barren, or ruderal), areas that contain or have the potential to support special-status species, sensitive habitat, or within 300 feet of suitable habitat to support special-status species (e.g., nesting passerines) as determined by the Department of City Planning and/or CDFW, the project applicant shall be required to conduct a biological resources assessment report to characterize the biological resources on-site and to determine the presence or absence of sensitive species. The report shall identify 1) approximate population size and distribution of any sensitive plant or animal species, 2) any sensitive habitats (such as wetlands or riparian areas), and 3) any potential impacts of Proposed Project on wildlife corridors. Off-	**Housing Element Update:** Significant and unavoidable **Safety Element Update:** Less than significant **Cumulative:** Significant and unavoidable

Impact Category	Checklist Threshold	Level of Impact Before Mitigation	Mitigation Measure	Level of Impact After Mitigation [3]
			site areas that may be directly or indirectly affected by the individual project shall also be surveyed. The report shall include site location, literature sources, methodology, timing of surveys, vegetation map, site photographs, and descriptions of on-site biological resources (e.g., observed and detected species, as well as an analysis of those species with the potential to occur on-site). The biological resources assessment report and surveys shall be conducted by a qualified biologist, and any special status species surveys shall be conducted according to standard methods of surveying for the species as appropriate. If sensitive species and/or habitat are absent from the individual project site and adjacent lands potentially affected by the individual project, a written report substantiating such shall be submitted to Department of City Planning (DCP) prior to issuance of a grading permit, and the project may proceed without any further biological investigation. If wildlife corridors are present, the report shall identify measures (such as providing native landscaping to provide cover on the wildlife corridor) that the individual project would be required to implement such that the existing wildlife corridor would remain. Wildlife corridors identified in the biological resources assessment report shall not be entirely closed by any development or improvements occurring within the Project Area. **4.3-1(b) Pre-Construction Bird Nest Surveys, Avoidance, and Notification** For all discretionary projects where sensitive species and/or habitat are identified, the biological resources assessment report shall require pre-construction surveys for sensitive species and/or construction monitoring to ensure avoidance, relocation, or safe escape of the sensitive species from the construction activities, as appropriate. If sensitive species are found to be nesting, brooding, denning, etc. on-site during the pre-construction survey or during construction monitoring, construction activities shall be halted until offspring are weaned, fledged, etc. and are able to escape the site or be safely relocated to appropriate off-site habitat areas. A qualified biologist shall be on-site to conduct surveys, for construction monitoring, to perform or oversee implementation of protective measures, and to determine when construction activity may resume. Additionally, the biological resources assessment report shall be submitted to DCP and California Department of Fish and Wildlife (CDFW) prior to ground-disturbing activities. A follow-up report documenting construction monitoring, relocation methods, and the results of the monitoring and species relocation shall also be submitted to DCP and CDFW following construction. Construction activities initiated during the bird nesting season (February 1 – August 31) involving removal of vegetation or other nesting bird habitat, including abandoned structures and other man-made features, a pre-construction nesting bird survey shall be conducted no more than three days prior to initiation of ground disturbance and vegetation removal activities. The nesting bird pre-construction survey shall be conducted on foot and shall include a 100-foot buffer around the construction site. The survey shall be conducted by a biologist familiar with the identification of avian species known to occur in southern California. If nests are found, an avoidance buffer shall be determined dependent upon the species, the proposed work activity, and existing disturbances associated with land uses outside of the site, which shall be demarcated by the biologist with bright orange construction fencing, flagging, construction lathe, or other means to demarcate the boundary. All construction personnel shall be notified as to the existence of the buffer zone and to avoid entering the buffer zone during the nesting season. No ground disturbing activities shall occur within the buffer until the avian biologist has confirmed that breeding/ nesting is completed, and the young have fledged the nest. Encroachment into the buffer shall occur only at the discretion of the qualified biologist on the basis that the encroachment will not be detrimental to an active nest. A Statement of Compliance signed by the Applicant and Owner is required to be submitted to Los Angeles Department of Building and Safety at plan check and prior to the issuance of any permit. A report summarizing the pre-construction survey(s), construction monitoring, and implementation of protective measures conducted shall be prepared by a qualified biologist and shall be submitted to the City within two weeks of project completion. Proposed Project site plans shall include a statement acknowledging compliance with the federal MBTA and CFGC that includes avoidance of active bird nests and identification of Best Management Practices to avoid impacts to active nests, including checking for nests prior to construction activities during February 1 to August 31 and what to do if an active nest is found so that the nest is not inadvertently impacted during grading or construction activities. **4.3-1(c) Focused Surveys for Rare Plants** If indicated as appropriate by the biological resources assessment report required in Mitigation Measure 4.3-1(a), focused surveys for special status plants shall be conducted. Prior to vegetation clearing for construction in open space areas, special status plants identified in the focused surveys shall be counted and mapped and a special-status plant relocation plan shall be developed and implemented to provide for translocation of the plants. The plan shall be prepared by a qualified biologist and shall include the following components: (1) identify an area of appropriate habitat, on-site preferred; (2) depending on the species detected, determine if translocation will take the form of seed collection and deposition, or transplanting the plants and surrounding soil as appropriate; (3) develop protocols for irrigation and maintenance of the translocated plants where appropriate; (4) set forth performance criteria (e.g., establishment of quantitative goals, expressed in percent cover or number of individuals, comparing the restored and impacted population) and remedial measures for the translocation effort; and (5) establish a five-year monitoring procedures/protocols for the	

Impact Category	Checklist Threshold	Level of Impact Before Mitigation	Mitigation Measure	Level of Impact After Mitigation [3]
			translocated plants. Five years after initiation of the restoration activities, a report shall be submitted to DCP and CDFW, which shall at a minimum discuss the implementation, monitoring, and management of the restoration activities over the five-year period and indicate whether the restoration activities have, in part or in whole, been successful based on the established performance criteria. The restoration activities shall be extended if the performance criteria have not been met at the end of the five-year period to the satisfaction of DCP, CDFW, and U.S. Fish and Wildlife Service (USFWS), when applicable. **4.3-1(d) Adaptive Management Plan** If indicated as appropriate in a reconnaissance, pre-construction or focused survey required in Mitigation Measure 4.3-1(a), (b), or (c) the biologist shall prepare an Adaptive Management Plan for future operations to ensure that operations will not result in impacts to special status species, such as lighting plans, fencing plans, revegetation plans, and/or necessary covenants to ensure property owners maintain their properties in a way to reduce impacts to native species, such as requirements for keeping domestic animals or use of non-native vegetation, and/or education campaigns. Applicants shall prepare necessary documentation and provide adequate assurances to ensure compliance with ongoing operational requirements, including such measures as, but not limited to, filing of covenants, creation of funding mechanism, or provision of bonds.	
Riparian Habitat	**Impact 4.3-2:** Would the Proposed 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 Wildlife or US Fish and Wildlife Service?	**Housing Element Update:** Potentially significant **Safety Element Update:** Less than significant	**4.3-2(a) Habitat Mitigation and Monitoring Plan** For discretionary projects that are in areas potentially containing sensitive natural communities or jurisdictional waters and riparian habitat, including streams, wetlands, riparian habitat, and other water bodies, affected sites as well as off-site areas that may be directly or indirectly affected by the individual development project, prior to the issuance of grading permits, the applicant shall prepare and submit a Habitat Mitigation and Monitoring Program (HMMP), which shall mitigate for impacts to CDFW jurisdictional habitat at a 2:1 ratio for permanent impacts and a 1:1 ratio for temporary impacts, or as otherwise approved by CDFW and the City. The HMMP shall mitigate for impacts to jurisdictional areas via an acceptable mitigation approach that involves one or a combination of the on-site or off-site restoration or enhancement of degraded in-kind habitats, preservation of in-kind habitats, or by a contribution to an in-lieu fee program approved by the City, CDFW (and USACE, RWQCB, if applicable). The final HMMP shall be developed by a qualified biologist, restoration ecologist or resource specialist and submitted to and approved by the City and CDFW (USACE, RWQCB, if applicable), in compliance with Clean Water Act Sections 401 and 404 and California Fish and Game Code 1602 and supporting regulations, prior to issuance of a grading permit for the project. In broad terms, this Program shall at a minimum include: • Description of the project/impact and mitigation sites; • Specific objectives; • Success criteria; • Plant palette; • Implementation plan; • Maintenance activities; • Monitoring plan; and • Contingency measures. Success criteria shall at a minimum be evaluated based on appropriate survival rates and percent cover of planted native species, as well as eradication and control of invasive species within the restoration area. The target species and native plant palette, as well as the specific methods for evaluating whether the project has been successful at meeting the above-mentioned success criteria shall be determined by the qualified biologist, restoration ecologist, or resource specialist and included in the HMMP. The HMMP shall be implemented over a five-year period and shall incorporate an iterative process of annual monitoring and evaluation of progress and allow for adjustments to the program, as necessary, to achieve desired outcomes and meet success criteria. Annual reports discussing the implementation, monitoring, and management of the HMMP shall be submitted to City and the CDFW (USACE, RWQCB, if applicable). Five years after project start, a final report shall be submitted to the City and the CDFW (USACE, RWQCB, if applicable), which shall at a minimum discuss the implementation, monitoring and management of the mitigation project over the five-year period, and indicate whether the HMMP has met the established success criteria. The annual reports and the final report shall include as-built plans submitted as an appendix to the report. Restoration will be considered successful after the success criteria have been met for a period of at least two years without any maintenance or remediation activities other than invasive species control. The project shall be extended if the success criteria have not been met at the end of the five-year period to the satisfaction of the City and the CDFW (USACE, RWQCB, if applicable).	**Housing Element Update:** Significant and unavoidable **Safety Element Update:** Less than significant **Cumulative:** Significant and unavoidable

Impact Category	Checklist Threshold	Level of Impact Before Mitigation	Mitigation Measure	Level of Impact After Mitigation [3]
			4.3-2(b) Protected Tree and Tree Canopy Survey For discretionary projects that include the removal of trees, prior to the issuance of a grading permit, a tree report and tree replanting plan shall be conducted by a certified arborist prior to project construction to tag and assess all trees (defined as woody plant material that is five inches or greater in diameter at breast height [DBH – four and a half feet off grade]) subject to the City's Protected Tree Ordinance on the project site. Trees shall be tagged to correspond with a tree exhibit map. Also, the genus and species of the trees, size of the trees at DBH, and structure and vigor of the trees shall be determined, and an evaluation of the trees' resource value (i.e., the biological impacts of the tree removals, potential to be considered wildlife habitat, and locating trees deserving protection) shall be completed. All protected trees shall receive a visual tree assessment (VTA – meaning tree observations shall be from the ground and that no special devises [e.g., increment borers, drills] shall be used). Following the completion of the tree survey, the arborist shall prepare a report that shall at a minimum provide a description of the general character of the trees on the site and identify opportunities and constraints for preservation. The report and tree replanting plan shall be provided to the City for review. As part of the assessment, a plot plan shall also be prepared indicating the location, type, and canopy coverage of all existing trees on the site and within the adjacent public right(s)-of-way. Based on the results of the tree survey, development plans shall be clustered to maximum extent feasible in order to avoid impacts to sensitive natural communities (e.g., oak woodlands, riparian habitats, extensive tree canopy) and to maintain the largest and most contiguous area of sensitive communities on the site. Additionally, the development plans shall include a proposed minimum buffer to protect adjacent sensitive communities. Development plans that impact sensitive natural communities shall include a detailed feasibility analysis showing how the design has accomplished these avoidance strategies; the City shall not approve development plans until the site design has adequately demonstrated maximum avoidance of sensitive natural communities to the satisfaction of the City Planning . Further, removal or planting of any tree in the public right(s)-of-way requires approval of the Board of Public Works. All trees in the public right(s)-of-way shall conform to the current standards of the Department of Public Works, Urban Forestry Division, Bureau of Street Services. The following measures shall be implemented in addition to those required under the City's Protected Tree Ordinance (Ordinance No. 177,404) to avoid and/or compensate for potential indirect impacts to preserved sensitive natural communities before, during, and following construction activities. *Pre-Construction* • Fencing: Protective fencing at least three feet high with signs and flagging shall be erected around all preserved sensitive natural communities where adjacent to proposed vegetation clearing and grubbing, grading, or other construction activities. The protective fence shall be installed at a minimum of five feet beyond the tree canopy dripline. The intent of protection fencing is to prevent inadvertent limb/vegetation damage, root damage and/or compaction by construction equipment. The protective fencing shall be depicted on all construction plans and maps provided to contractors and labeled clearly to prohibit entry, and the placement of the fence in the field shall be approved by a qualified biologist prior to initiation of construction activities. The contractor shall maintain the fence to keep it upright, taut and aligned at all times. Fencing shall be removed only after all construction activities are completed. • Pre-Construction Meeting: A pre-construction meeting shall be held between all site contractors and a registered consulting arborist and/or a qualified biologist. All site contractors and their employees shall provide written acknowledgement of their receiving sensitive natural community protection training. This training shall include, but shall not be limited to, the following information: (1) the location and marking of protected sensitive natural communities; (2) the necessity of preventing damage to these sensitive natural communities; and (3) a discussion of work practices that shall accomplish such. *During Construction* • Fence Monitoring: The protective fence shall be monitored regularly (at least weekly) during construction activities to ensure that the fencing remains intact and functional, and that no encroachment has occurred into the protected natural community; any repairs to the fence or encroachment correction shall be conducted immediately. • Equipment Operation and Storage: Contractors shall avoid using heavy equipment around the sensitive natural communities. Operating heavy machinery around the root zones of trees would increase soil compaction, which decreases soil aeration and, subsequently, reduces water penetration into the soil. All heavy equipment and vehicles shall, at minimum, stay out of the fenced protected zones, unless where specifically approved in writing and under the supervision of a registered consulting arborist and/or a qualified biologist.	

Impact Category	Checklist Threshold	Level of Impact Before Mitigation	Mitigation Measure	Level of Impact After Mitigation [3]
			• Materials Storage and Disposal: Contractors shall not store or discard any construction materials within the fenced protected zones and shall remove all foreign debris within these areas. The contractors shall leave the duff, mulch, chips, and leaves around the retained trees for water retention and nutrient supply. Contractors shall avoid draining or leakage of equipment fluids near retained trees. Fluids such as gasoline, diesel, oils, hydraulics, brake and transmission fluids, paint, paint thinners, and glycol (anti-freeze) shall be disposed of properly. The contractors shall ensure that equipment be parked at least 50 feet, and that equipment/vehicle refueling occur at least 100 feet, from fenced protected zones to avoid the possibility of leakage of equipment fluids into the soil. • Grade Changes: Contractors shall ensure that grade changes, including adding fill, shall not be permitted within the fenced protected zone without special written authorization and under supervision by a registered consulting arborist and/or a qualified biologist. Lowering the grade within the fenced protected zones could necessitate cutting main support and feeder roots, thus jeopardizing the health and structural integrity of the tree(s). Adding soil, even temporarily, on top of the existing grade could compact the soil further, and decrease both water and air availability to the tree roots. Contractors shall ensure that grade changes made outside of the fenced protected zone shall not create conditions that allow water to pond. • Trenching: Except where specifically approved in writing beforehand, all trenching shall be outside of the fenced protected zone. Roots primarily extend in a horizontal direction forming a support base to the tree similar to the base of a wineglass. Where trenching is necessary in areas that contain roots from retained trees, contractors shall use trenching techniques that include the use of either a root pruner (Dosko root pruner or equivalent) or an Air-Spade to limit root impacts. A registered consulting arborist shall ensure that all pruning cuts shall be clean and sharp, to minimize ripping, tearing, and fracturing of the root system. Root damage caused by backhoes, earthmovers, dozers, or graders is severe and may ultimately result in tree mortality. Use of both root pruning and Air-Spade equipment shall be accompanied only by hand tools to remove soil from trench locations. The trench shall be made no deeper than necessary. • Erosion Control: Appropriate erosion control best management practices (BMPs) shall be implemented to protect preserved sensitive natural communities during and following project construction. Erosion control materials shall be certified as weed free. • Inspection: A registered consulting arborist shall inspect the preserved trees adjacent to grading and construction activity on a monthly basis for the duration of the grading and construction activities. A report summarizing site conditions, observations, tree health, and recommendations for minimizing tree damage shall be submitted by the registered consulting arborist following each inspection. *Post-construction* • Mulch: The contractors shall ensure that the natural duff layer under all trees adjacent to construction activities shall be maintained. This would stabilize soil temperatures in root zones, conserve soil moisture, and reduce erosion. The contractors shall ensure that the mulch be kept clear of the trunk base to avoid creating conditions favorable to the establishment and growth of decay causing fungal pathogens. Should it be necessary to add organic mulch beneath retained oak trees, packaged or commercial oak leaf mulch shall not be used as it may contain root fungus. Also, the use of redwood chips shall be avoided as certain inhibitive chemicals may be present in the wood. Other wood chips and crushed walnut shells can be used, but the best mulch that provides a source of nutrients for the tree is its own leaf litter. Any added organic mulch added by the contractors shall be applied to a maximum depth of 4 inches where possible. • Watering Adjacent Plant Material: All installed landscaping plants near the preserved sensitive natural communities shall require moderate to low levels of water. The surrounding plants shall be watered infrequently with deep soaks and allowed to dry out in-between, rather than frequent light irrigation. The soil shall not be allowed to become saturated or stay continually wet, nor should drainage allow ponding of water. Irrigation spray shall not hit the trunk of any tree. The contractors shall maintain a 30-inch dry-zone around all tree trunks. An above ground micro-spray irrigation system shall be used in lieu of typical underground pop-up sprays. • Monitoring: A certified arborist shall inspect the trees preserved on the site adjacent to construction activities for a period of two years following the completion of construction. Monitoring visits shall be completed quarterly, totaling eight visits. Following each monitoring visit, a report summarizing site conditions, observations, tree health, and recommendations for promoting tree health shall be submitted to the City. Additionally, any tree mortality shall be noted and any tree dying during the two-year monitoring period shall be replaced at a minimum 3:1 ratio on-site in coordination with the City.	

Impact Category	Checklist Threshold	Level of Impact Before Mitigation	Mitigation Measure	Level of Impact After Mitigation [3]
Migratory Wildlife, Biological Resources Plan	**Impact 4.3-3:** Would the Proposed Project interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?	**Housing Element Update:** Potentially significant **Safety Element Update:** Less than significant	Refer to Mitigation Measure 4.3-1.	**Housing Element Update:** Significant and unavoidable **Safety Element Update:** Less than significant **Cumulative:** Significant and unavoidable
Local Policies and Ordinances	**Impact 4.3-4:** Would the Proposed Project conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	**Housing Element Update:** Less than significant **Safety Element Update:** Less than significant	No mitigation required.	**Housing Element Update:** Less than significant **Safety Element Update:** Less than significant
Cultural Resources				
Historical Resources	**Impact 4.4-1:** Would the Housing Element Update cause a substantial adverse change in the significance of a historical resource as defined in § 15064.5?	**Housing Element Update:** Potentially significant	**4.4-1(a) Identification of Built-Environment Historical Resources** For any discretionary development project involving a property that is a known or potential historical resource, in accordance with the CEQA Guidelines, the following procedures shall be implemented to identify historical resources located on a development site and implement appropriate techniques to avoid or reduce significant impacts to historical resources. During the project planning phase, a cultural resources record search shall be conducted via the South Central Coastal Information Center (SCCIC) to determine whether the project area has been subject to previous cultural resources studies and whether historical resources were identified. The City of Los Angeles Historic Resources Survey (SurveyLA) results shall be consulted to determine whether the project area has been subject to previous cultural resources studies and whether historical resources were identified. If a development involves the alteration or demolition of a property 45 years of age or older that has not been evaluated previously a historical resources evaluation shall be prepared for the development. The evaluation shall be prepared according to the following standards: • The evaluation shall be prepared by a qualified architectural historian or historian who meets the Secretary of the Interior's Professional Qualifications Standards (PQS) in architectural history or history. • The qualified architectural historian or historian shall conduct an intensive-level evaluation in accordance with the guidelines and best practices promulgated by the State Office of Historic Preservation (OHP) and the City of Los Angeles Office of Historic Resources (OHR) to identify any potential historical resources within the Area of Potential Effects. All buildings and structures 45 years of age or older not located in an HPOZ shall be evaluated within their historic context and documented in a report meeting the OHP and OHR guidelines. All evaluated properties shall be documented on Department of Parks and Recreation Series 523 Forms. The report shall be submitted to the OHR for review and concurrence. If, as a result of the cultural resources records search or the subsequent historical resources evaluation, it is determined that the proposed development would result in a significant adverse effect to one or more historical resources, appropriate techniques consistent with the Secretary of Interior Standards to avoid or reduce significant impacts to the degree feasible shall be implemented. Measures to reduce impacts shall generally be overseen by a qualified architectural historian or historic architect meeting the PQS, unless unnecessary under the circumstance (e.g., preservation in place). In conjunction with any development application that may affect the historical resource, a report identifying and specifying the treatment of character-defining features and construction activities shall be provided to the City for review. Measures may include but not be limited to mitigation measures 4.4-1(b) to 4.4-1(j) below. **4.4-1(b) Rehabilitation of Historical Resources** If a development proposes alteration or addition to a historical resource to allow for its continued use, the integrity of the resource could be undermined such that it would no longer convey the historical associations that make it eligible for listing. To reduce such impacts, a resource may be rehabilitated in conformance with the Secretary's Standards to allow for continued or new uses while maintaining features that convey the resource's historical significance. Construction of a project as it relates to rehabilitation of a historical resource shall be monitored for compliance with the Secretary's Standards. The construction monitoring shall: • Be performed by a professional meeting the Secretary of the Interior's Professional Qualifications Standards (PQS) for historic architecture with at least five years of demonstrated experience in rehabilitating historic buildings of similar size.	**Housing Element Update:** Significant and unavoidable **Cumulative:** Significant and unavoidable

Impact Category	Checklist Threshold	Level of Impact Before Mitigation	Mitigation Measure	Level of Impact After Mitigation [3]
			• Be performed by the professional at regular intervals during the rehabilitation of the historical resource. The intervals shall include, but not necessarily limited to 50 percent, 90 percent, and 100 percent construction. The monitor shall create a technical memorandum at each interval summarizing the findings, making recommendations as necessary to ensure compliance with the Secretary's Standards, and documenting construction with digital photographs. Compliance with the Secretary's Standards shall include the review specifications, tests, and mockups for the treatment of historic building materials. The monitor shall submit the memoranda to City of Los Angeles Office of Historic Resources (OHR) for concurrence. In the event OHR does not concur, all activities shall cease until compliance with the Secretary's Standards is resolved and concurrence is obtained. **4.4-1(c) Design Requirements for New Construction** If a development proposes new construction on a site containing a historical resource, the project design team shall consult with a preservation architect or other qualified professional to ensure that new construction is designed and constructed in accordance with the Secretary of Interior's Standards to ensure the proposed new construction would protect the historic integrity of the historical resource and any adjacent historical resources. The final design shall require the approval of OHR. In the event OHR does not concur, all activities shall cease until compliance with the Secretary's Standards is resolved and concurrence is obtained. **4.4-1(d) Relocation and Rehabilitation of Historical Resources** For any project for which retention or rehabilitation of a historical resource is not feasible, a feasibility study, subject to City review and approval, shall be prepared weighing the costs, advantages, and disadvantages of relocation, which would preclude the demolition of a resource by removing it intact to another site. If the study concludes it is feasible to relocate the historical resource, the structure's availability shall be advertised in historic preservation websites such as HistoricForSale, Historic Properties, Old Houses, and Preservation Directory and a local newspaper such as the Los Angeles Times for a period of not less than 60 days by the project applicant. Any such relocation efforts shall be undertaken in accordance with a Relocation and Rehabilitation Plan prepared by the party taking possession of the structure to be moved. The Relocation and Rehabilitation Plan shall be developed in conjunction with a qualified architectural historian, historic architect, or historic preservation professional who satisfies the Secretary of the Interior's Professional Qualifications Standards (PQS) for History, Architectural History, or Architecture, pursuant to 36 CFR 61. The Plan shall include relocation methodology recommended by the National Park Service, which are outlined in the booklet entitled "Moving Historic Buildings," by John Obed Curtis (1979). Upon relocation of the structure to the new site, any maintenance, repair, stabilization, rehabilitation, preservation, conservation, or reconstruction work performed in conjunction with the relocation of the building shall be undertaken in a manner consistent with the Secretary's Standards. The Relocation and Rehabilitation Plan shall be reviewed and approved by the City of Los Angeles Office of Historic Resources (OHR) prior to its implementation. In addition, a plaque describing the date of the move and the original location shall be placed in a visible location on of the historical resource. If after three months it is evident that no party is interested in purchasing the historical resource per the mitigation measure stipulated above, then the Historic American Building Survey (HABS) Level II documentation, as described below in Mitigation Measure 4.4-1(d), would be required to document the important history and architecture of the historical resource. Relocation shall not take place until the historical resource is first recorded pursuant to the HABS Level II requirements. Any relocation activities undertaken by third parties shall be fully completed prior to the commencement of construction activities. The relocated historical resource shall be moved in accordance with all applicable regulatory requirements, including those applicable provisions of Chapter 83 of the Los Angeles Building Code, and shall be moved during off-peak hours so as to avoid potential traffic impacts. **4.4-1(e) Historic American Building Survey Documentation** If significant historical resources are identified on a development site and avoidance or compliance with the Secretary's Standards are not possible, prior to development activities, the project applicant shall prepare a Historic American Buildings Survey (HABS) Level II documentation for the historical resource and remaining historic property setting. The HABS document shall be prepared by a qualified architectural historian, historic architect, or historic preservation professional who satisfies the Secretary of the Interior's PQS for History, Architectural History, or Architecture, pursuant to 36 CFR 61. This document shall record the history and architecture of the property, as well as important events or other significant contributions to the patterns and trends of history with which the property is associated, as appropriate. The property's physical condition, both historic and current, shall be documented through site plans; historic maps and photographs; original as-built drawings; large format photographs; and written data. Building exteriors, representative interior spaces, character-defining features, as well as the property setting and contextual views shall be documented. Field photographs and notes shall also be included. All documentation components shall be completed in accordance with the Secretary of the Interior's Standards and Guidelines for Architectural and Engineering Documentation. The HABS documentation shall be submitted to the National Park Service for transmittal to the Library of Congress, and archival copies shall be sent to the City of Los	

Impact Category	Checklist Threshold	Level of Impact Before Mitigation	Mitigation Measure	Level of Impact After Mitigation [3]
			Angeles Office of Historic Resources (OHR) and Los Angeles Public Library. Per the Secretary of the Interior's Standards for Architectural and Engineering Documentation, preparation of the HABS document serves to "[provide] important information on a property's significance for use by scholars, researchers, preservationists, architects, engineers and others interested in preserving and understanding historic properties."[4] **4.4-1(f) Interpretive Program** If avoidance of the historical resource is not feasible, the project shall include an interpretive display located on the property which addresses the historical context and architectural or historical significance of the resource and informs the public about the history and original configuration of the property. The display shall be reviewed and approved by the City prior to installation at a site to be chosen by the City. **4.4-1(g) Construction Monitoring, Salvage, and Reuse** If retention of a historical resource is not feasible, and the historical resource is significant for its architectural design or construction method, the project applicant shall retain a qualified architectural historian or historic preservation professional who satisfies the Secretary of the Interior's Professional Qualifications Standards (PQS) for Architectural History to conduct construction monitoring and salvage during demolition. Any important historic fabric associated with the historical resource's period of significance shall be fully recorded in photographic images and written manuscript notes. Prior to the commencement of demolition, significant material shall be inventoried and evaluated for potential salvage, analysis, reuse, and interpretation. The qualified architectural historian or historic preservation professional shall prepare the necessary written and illustrated documentation in a construction monitoring and salvage report. This document shall record any historically significant construction methods completed during the period of significance as well as document the historical resource's present physical condition through site plans; historic maps and photographs; sketch maps; digital photography; and written data and text. A salvage and reuse plan shall be created, identifying elements and materials that can be saved prior to the issuance of a demolition permit. The plan shall be prepared by a qualified architectural historian or historic preservation professional with demonstrated experience in developing salvage and reuse plans. The plan shall be submitted to the City of Los Angeles Office of Historic Resources. Elements and materials that may be salvageable include: windows, doors, roof tiles, decorative elements, framing members, light fixtures, plumbing fixtures, and flooring materials such as tiles and hardwood. The salvageable items shall be removed in the gentlest, least destructive manner possible. The plan shall identify the recipient(s) for the items. All documentation components shall be completed in accordance with the Secretary of the Interior's Standards and for Archaeological Documentation for above ground structures. The completed documentation shall be placed on file at the South Central Coastal Information Center, California State University, Fullerton, California; and the City of Los Angeles Public Library. Findings shall be incorporated into the Historic American Buildings Survey (HABS) report. **4.4-1(h) Temporary Protective Relocation** For projects for which development would have the potential to cause damage to a historical resource and the resource cannot be protected in place, if feasible, the resource may be temporarily relocated to prevent such damage. Prior to development, the applicant shall contact stakeholders directly via letter detailing the location of the project site, its potential impact on the resource, project timeframe, identification of the affected resource, proposed procedures for removal resource or parts of resource with affected, where and for how long the resource would be stored, how it would be secured, and other relevant details. Photographic and documentary recordation of the potentially impacted resource shall be completed by a qualified architectural historian meeting the PQS for Architectural History. Prior to any construction or demolition activities that have the potential to damage the resource, elements that cannot be reasonably protected in place shall be carefully removed by a qualified restoration contractor. Each removed element shall be promptly stored at a secured off-site location. Following completion of project construction, reinstallation of each affected element at its original documented location shall occur [by a qualified restoration contractor] with work completed to the satisfaction of the OHR, and the Department of Public Works Bureau of Engineering, and other interested parties. Excavation and construction activities in the vicinity of the resource and work conducted by the restoration contractor to remove, store, and replace affected elements, shall be monitored by a qualified historic preservation consultant meeting the PQS for Architectural History and documented in a monitoring report that shall be provided to OHR, and other interested parties. **4.4-1(i) Excavation and Shoring Plan**	

[4] National Park Service. "Archaeology and Preservation: Secretary of the Interior's Standards and Guidelines [As Amended and Annotated], Secretary of the Interior's Standards for Architectural and Engineering Documentation," n.d. https://www.nps.gov/history/local-law/arch_stnds_6.htm. Accessed April 9, 2021.

Impact Category	Checklist Threshold	Level of Impact Before Mitigation	Mitigation Measure	Level of Impact After Mitigation [3]
			For projects in which excavation and shoring have the potential to damage a historical resource in close proximity to the project site, an excavation and shoring plan shall be implemented to reduce the likelihood that earth-moving activities will result in damage to the historical resource due to earth moving activities. Procedures shall be implemented for shoring system design and monitoring of pre-excavation, grading, and shoring activities: • Excavation and shoring plans and calculations for temporary shoring walls shall be prepared by a California Registered Civil Engineer experienced in the design and construction of shoring systems and hired under the excavation subcontractor. The shoring systems shall be selected and designed in accordance with all current code requirements, industry best practices, and the recommendations of the Project Geotechnical Engineer. Maximum allowable lateral deflections for the project site are to be developed by the Geotechnical Engineer in consideration of adjacent structures, property, and public rights-of-way. These deflection limits shall be prepared in consideration of protecting adjacent historic resources. The shoring engineer shall produce a shoring design, incorporating tie-backs, soldier piles, walers, or other means of reinforcement, that is of sufficient capacity and stiffness to meet or exceed the strength and deflection requirements. Calculations shall be prepared by the shoring engineer showing the anticipated lateral deflection of the shoring system and its components and demonstrating that these deflections are within the allowable limits. Where tie-back anchors shall extend across property lines or encroach into the public rights-of-way, appropriate notification and approval procedures shall be followed. The final excavation and shoring plans shall include all appropriate details, material specifications, testing and special inspection requirements and shall be reviewed by the Geotechnical Engineer for conformance with the design intent and submitted to the Los Angeles Department of Building and Safety (LADBS) for review and approval during the grading permit application submission. The Geotechnical Engineer shall provide on-site observation during the excavation and shoring work. • The general contractor shall hire a California Registered Professional Engineer or California Professional Land Surveyor to prepare an Adjacent Structures Construction Monitoring Plan, subject to review and approval by LADBS, prior to initiation of any excavation, grading, or shoring activities to ensure the protection of adjacent historic resources from damage due to settlement during construction and excavation. The Adjacent Structures Construction Monitoring Plan shall be carried out by a California Professional Land Surveyor and establish survey monuments and document and record through any necessary means, including video, photography, survey, etc. the initial positions of adjacent structures, sidewalks, buildings, utilities, facades, cracks, etc. to form a baseline for determining settlement or deformation. Upon installation of soldier piles, survey monuments shall be affixed to the tops of representative piles so that deflection can be measured. The shored excavation and adjacent structures, sidewalks, buildings, utilities, facades, cracks, etc. shall be visually inspected each day. Survey monuments shall be measured at critical stages of dewatering, excavation, shoring, and construction but shall not occur less frequently than once every 30 days. Reports shall be prepared by the California Professional Land Surveyor documenting the movement monitoring results. • Appropriate parties shall be notified immediately, and corrective steps shall be identified and implemented if movement exceeds predetermined thresholds, calculated amounts, or if new cracks or distress are observed in adjacent structures, sidewalks, buildings, utilities, façades, etc. In the event that settlement due to excavation or construction activity causes damage requiring touch-ups or repairs to the finishes of adjacent historic buildings, that work shall be performed in consultation with a qualified preservation consultant and in accordance with the California Historical Building Code and the Secretary's Standards, as appropriate. • Foundation systems are to be designed in accordance with all applicable loading requirements, including seismic, wind, settlement, and hydrostatic loads, as determined by the California Building Code and in accordance with the recommendations provided by the Geotechnical Engineer. **4.4-1(j) Structural Construction Monitoring** For developments in which excavation and shoring have the potential to damage a historical resource in close proximity to the project site, construction monitoring shall be implemented to minimize damage to nearby historical resources. The construction monitoring shall be performed by a licensed structural engineer with at least five years of demonstrated experience in rehabilitating historic buildings of similar size. A survey the existing foundations and other structural aspects of historical resources in close proximity to the site shall be conducted to establish baseline conditions and provide a shoring design to protect the historical resources from potential damage. The survey shall take place prior to any construction activities. Pot holing or other destructive testing of the below grade conditions on the development site and immediately adjacent to the nearby historical resources may be necessary to establish baseline conditions and prepare the shoring design. A construction monitor shall submit to OHR a pre-construction survey that establishes baseline conditions to be monitored during construction, prior to issuance of any building permit for the development. The monitoring process shall include a meeting with the project contractor prior to the demolition and/or excavation activities to discuss minimizing damage to historical resources in close proximity.	

Impact Category	Checklist Threshold	Level of Impact Before Mitigation	Mitigation Measure	Level of Impact After Mitigation [3]
Archaeological Resources	**Impact 4.4-2:** Would the Housing Element Update cause a substantial adverse change in the significance of an archaeological resource pursuant to § 15064.5?	**Housing Element Update:** Potentially significant	See **Mitigation Measures 4.15-1(a) and 4.15-1 (b)** under *Tribal Cultural Resources*. **4.4-2 Archaeological Resources** In accordance with CEQA Guidelines, development projects under the Housing Element Update that may result in impacts to archaeological resources, consisting of those that may involve ground disturbance in native soils or soils of unknown origin, shall implement the following procedures to identify archaeological resources located in a development site and implement applicable impact reduction techniques to reduce substantial adverse effects associated with the inadvertent discovery of archaeological resources. A. At the time of application for discretionary land use permits or subdivisions that involve disturbances within previously undisturbed native soils, the project applicant shall retain a qualified archaeologist meeting the Secretary of the Interior's Professional Qualifications Standards (PQS) in archaeology to complete a cultural resources assessment of the development site. A cultural resources assessment may include an archaeological pedestrian survey of the development site, if possible, and sufficient background archival research and field sampling to determine whether subsurface prehistoric or historic remains may be present. Archival research should include a records search conducted at the South Central Coastal Information Center (SCCIC) and a Sacred Lands File (SLF) search conducted with the Native American Heritage Commission (NAHC). B. If prehistoric or historic archaeological remains are identified as a result of the SCCIC or SLF searches, the remains shall be avoided and preserved in place where feasible. C. Where preservation is not feasible, each resource shall be evaluated for significance and eligibility to the California Register. Phase 2 evaluation shall include any necessary archival research to identify significant historical associations as well as mapping of surface artifacts, collection of functionally or temporally diagnostic tools and debris, and excavation of a sample of the cultural deposit to characterize the nature of the sites, define the artifact and feature contents, determine horizontal boundaries and depth below surface, and retrieve representative samples of artifacts and other remains. D. Excavation at Native American sites shall be monitored by a geographically affiliated tribal representative, as agreed upon in any formal consultation proceedings with the geographically affiliated tribe or as indicated by the NAHC. E. Cultural materials collected from the sites shall be processed and analyzed in the laboratory according to standard archaeological procedures. The age of the remains shall be determined using radiocarbon dating and other appropriate procedures; lithic artifacts, faunal remains, and other cultural materials shall be identified and analyzed according to current professional standards. F. Following laboratory analysis, the significance of the sites shall be evaluated according to the criteria of the California Register. The results of the investigations shall be presented in a technical report following the standards of the California Office of Historic Preservation (OHP) publication "Archaeological Resource Management Reports: Recommended Content and Format (1990 or latest edition)" (http://ohp.parks.ca.gov/pages/1054/files/armr.pdf). G. Upon completion of the work, all artifacts, other cultural remains, records, photographs, and other documentation shall be curated an appropriate curation facility. All fieldwork, analysis, report production, and curation shall be fully funded by the applicant. H. If the resources meet California Register significance standards, the City shall ensure that all feasible recommendations for impact reduction of archaeological impacts are incorporated into the final design and permits issued for development. Necessary Phase 3 data recovery excavation, conducted to exhaust the data potential of significant archaeological sites, shall be carried out by a qualified archaeologist meeting the Secretary of the Interior's PQS for archaeology according to a research design reviewed and approved by the City prepared in advance of fieldwork and using appropriate archaeological field and laboratory methods consistent with the OHP Planning Bulletin 5 (1991), Guidelines for Archaeological Research Design, or the latest edition thereof. I. As applicable, the final Phase 1 Inventory, Phase 2 Testing and Evaluation, or Phase 3 Data Recovery reports shall be submitted to the City prior to issuance of construction permit. Recommendations contained therein shall be implemented throughout all ground disturbance activities. J. If recommended by a cultural resources assessment, prior to issuance of a grading permit and prior to the start of any ground-disturbing activity, the applicant shall retain a qualified archaeologist who meets the Secretary of the Interior's PQS to oversee an archaeological monitor who shall be present during construction excavations, such as demolition, clearing/grubbing, grading, trenching, or any other construction excavation activity associated with the project, including peripheral activities, such as sidewalk replacement, utilities work, and landscaping, which may occur adjacent to the project site. The frequency of monitoring shall be based on the rate of excavation and grading activities, the materials being excavated (younger sediments vs. older sediments), the depth of excavation, and, if found, the abundance and type of archaeological resources encountered. Full-time monitoring may be reduced to part-time inspections, or ceased entirely, if determined adequate by the qualified archaeologist.	**Housing Element Update:** Significant and unavoidable **Cumulative:** Significant and unavoidable

Impact Category	Checklist Threshold	Level of Impact Before Mitigation	Mitigation Measure	Level of Impact After Mitigation [3]
			Prior to commencement of excavation activities, Archaeological Sensitivity Training shall be given for construction personnel. The training session shall be carried out by the qualified archaeologist and shall focus on how to identify archaeological resources that may be encountered during earthmoving activities and the procedures to be followed in such an event. K. In the event that historic (e.g., bottles, foundations, refuse dumps/privies, railroads, etc.) or prehistoric (e.g., hearths, burials, stone tools, shell and faunal bone remains, etc.) archaeological resources are unearthed, ground-disturbing activities shall be halted or diverted away from the vicinity of the find so that the find can be evaluated. A 50-foot buffer within which construction activities shall not be allowed to continue shall be established by the qualified archaeologist around the find. Work shall be allowed to continue outside of the buffer area. All archaeological resources unearthed by project development activities shall be evaluated by the qualified archaeologist. If a resource is determined by the qualified archaeologist to constitute a "historical resource" pursuant to CEQA Guidelines Section 15064.5(a) or a "unique archaeological resource" pursuant to Public Resources Code Section 21083.2(g), the qualified archaeologist shall coordinate with the applicant and the City to develop a formal treatment plan that would serve to reduce impacts to the resources. The treatment plan established for the resources shall be in accordance with CEQA Guidelines Section 15064.5(f) for historical resources and Public Resources Code Sections 21083.2(b) for unique archaeological resources. Preservation in place (i.e., avoidance) is the preferred manner of treatment. If, in coordination with the City, it is determined that preservation in place is not feasible, appropriate treatment of the resource shall be developed by the qualified archaeologist in coordination with the City and may include implementation of archaeological data recovery excavations to remove the resource along with subsequent laboratory processing and analysis. Any archaeological material collected shall be curated at a public, non-profit institution with a research interest in the materials, if such an institution agrees to accept the material. If no institution accepts the archaeological material, they shall be donated to a local school, Tribe, or historical society in the area for educational purposes.	
Geology and Soils				
Paleontological Resources	**Impact 4.5-1:** Will the Housing Element Update directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	**Housing Element Update:** Potentially significant	**4.5-1(a) Paleontological Procedures for Discretionary Projects** For all discretionary projects that involve excavation or grading activities at depths greater than previous disturbance on the respective site(s), prior to the start of construction, the following shall be conducted as discussed in detail below: prepare a resource assessment and records search for the presence of paleontological resources to determine if the project site is underlain by paleontological resources; monitor all excavation and grading activities in areas underlain by soils or geologic units potentially containing paleontological resources; and identify, record, and evaluate all paleontological resources uncovered during project construction and submit a paleontological assessment report to the City for review and approval. In addition, during project construction, the following shall be conducted as discussed in detail below: cease all construction activities in the event of the discovery of paleontological resources; conduct fossil recovery as necessary by a qualified paleontologist; avoid handling of paleontological resources by parties other than the qualified paleontologist responsible for conducting fossil recovery; and resume construction activities only upon clearance by the qualified paleontologist. These procedures, as detailed below, shall be implemented to avoid impacts to paleontological resources or reduce potential impacts to a less-than-significant level: • Prior to excavation and grading activities, a qualified paleontologist shall prepare a resource assessment and records search for the potential presence of paleontological resources. This assessment shall be informed by records from the Natural History Museum of Los Angeles County. If the assessment determines the project site is underlain by soils or geologic units potentially containing paleontological resources and the project would include ground-disturbing activities, a qualified paleontologist shall monitor all excavation and grading activities, and shall identify, record, and evaluate the significance of any paleontological finds during construction. The paleontologist's assessment shall be submitted to the City for review and approval prior to the commencement of construction activities, and construction may not commence until the City has provided approval of the outcome of the paleontologist's assessment of the project site. • If paleontological resources are uncovered during construction activities (in either a previously disturbed or undisturbed area), all ground-disturbing activities in the area of the find shall cease until a qualified paleontologist has evaluated the find, and identified and implemented the appropriate course of action in accordance with federal, state, and local guidelines. This may require fossil recovery, described below. Construction activities in the area of the discovery shall commence again only after the identified resource(s) are properly processed by a qualified paleontologist, and if construction activities are cleared by the qualified paleontologist to continue. • If fossils are discovered, a qualified paleontologist shall recover them. Typically, fossils can be safely salvaged quickly by a single paleontologist and not disrupt construction activity. In some cases, larger fossils (such as complete skeletons or large mammal fossils) require more extensive excavation and longer salvage periods. In this case the paleontologist would have the authority to	**Housing Element Update:** Significant and unavoidable **Cumulative:** Significant and unavoidable

Impact Category	Checklist Threshold	Level of Impact Before Mitigation	Mitigation Measure	Level of Impact After Mitigation [3]
			temporarily direct, divert or halt construction activity to ensure that the fossil(s) can be removed in a safe and timely manner. Handling and disposition of fossils is done at the direction and guidance of a qualified paleontologist. • Personnel of the project shall not collect or move any paleontological resources or associated materials; the identified qualified paleontologist is the only party that shall handle paleontological find(s), including but not limited to collection or removal. • If cleared by the qualified paleontologist, construction activity may continue unimpeded on other portions of the project site that would not affect evaluation or recovery of the identified resource(s). **4.5-1(b) Worker Environmental Awareness Program, Fossil Salvage, and Construction Monitoring** For all discretionary projects located on previously undisturbed land, and for all discretionary projects that would involve excavation of greater than 20 feet deep or excavation for two or more subterranean levels, the following shall be implemented as discussed in detail below: conduct a Paleontological Worker Environmental Awareness Program (WEAP); conduct fossil recovery as necessary by a qualified paleontologist; conduct paleontological monitoring for all ground disturbing activities in undisturbed sediments at depths greater than five feet; and reduce or cease paleontological monitoring only when determined to be appropriate by the qualified paleontologist. During the implementation of these requirements, all reasonable methods shall be used to determine the potential that paleontological resources are present on the project site, including through searches of databases and records, and surveys. If there is a medium to high potential that paleontological resources are located on the project site and it is possible that these resources will be impacted, monitoring will be conducted for all excavation, grading or other ground disturbance activities to identify any resources and avoid potential impacts to such resources. These procedures, as detailed below, shall be implemented to avoid impacts to paleontological resources or reduce potential impacts to a less-than-significant level: • Paleontological WEAP. Prior to the start of construction, the paleontological monitor shall conduct training for construction personnel regarding the appearance of fossils and the procedures for notifying paleontological staff should fossils be discovered by construction staff. In the event of a fossil discovery by construction personnel, the City shall be notified and all work in the immediate vicinity of the find shall cease and a qualified paleontologist shall be contacted to evaluate the find before restarting work in the area. If it is determined that the fossil(s) is(are) scientifically significant, the paleontological monitor shall complete the next two steps, for fossil salvage and construction monitoring. • Fossil Salvage. The qualified paleontologist or designated paleontological monitor shall recover intact fossils and notify the City of any fossil salvage and recovery efforts. Typically, fossils can be safely salvaged quickly by a single paleontologist and not disrupt construction activity. In some cases, larger fossils (such as complete skeletons or large mammal fossils) require more extensive excavation and longer salvage periods. In this case the paleontologist shall have the authority to temporarily direct, divert or halt construction activity to ensure that the fossil(s) can be removed in a safe and timely manner. Any fossils shall be handled and deposited consistent with a mitigation plan prepared by the paleontological monitor. • Paleontological Resource Construction Monitoring. Additional ground disturbing construction activities (including grading, trenching, foundation work and other excavations) in undisturbed sediments at depths greater than five feet is considered to have high paleontological sensitivity, and shall be monitored on a full-time basis by a qualified paleontologist or designated paleontological monitor during ground disturbance, including the initial five feet below the ground surface, as areas with high paleontological sensitivity may contain resources at shallow depths and within the first five feet. If the paleontological monitor determines that full-time monitoring is no longer warranted, he or she may recommend that monitoring be reduced to periodic spot-checking or cease entirely; revisions to the monitoring plan shall be submitted to the City for review and approval prior to implementation. Monitoring shall be reinstated if any new or unforeseen deeper ground disturbances are required. **4.5-1(c) Treatment of Paleontological Resources** For all projects where known paleontological resources are present and would be disturbed by project activities, and for all projects where the extent of paleontological resources are unknown and paleontological monitoring is conducted in accordance with Mitigation Measures 4.5-1(a) or 4.5-1(b) as provided above, all paleontological resources identified on a project site shall be assessed by a qualified paleontologist and treated in accordance with federal, state, and local standards. The qualified paleontologist shall prepare a report according to current professional standards including those of the SVP that describes the resource, how it was assessed, and disposition. The report shall be submitted to the City for review and approval. Project activities shall not proceed until the analysis and treatment of on-site paleontological resources has been approved by the City.	

Impact Category	Checklist Threshold	Level of Impact Before Mitigation	Mitigation Measure	Level of Impact After Mitigation [3]
Greenhouse Gas Emissions				
Plans, Policies or Regulations	**Impact 4.6-1:** Is the Housing Element Update consistent with SB 32, SB 375 (through demonstration of conformance with the 2020-2045 RTP/SCS), the Sustainable City pLAn, and GreenLA?	**Housing Element Update:** Less than significant	No mitigation required.	**Housing Element Update:** Less than significant
Hazards and Hazardous Materials				
Hazardous Materials Upset or Accident	**Impact 4.7-1:** Would the Housing Element Update create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?	**Housing Element Update:** Less than significant	No mitigation required.	**Housing Element Update:** Less than significant
Hazards within ¼ Mile of School	**Impact 4.7.2:** Would the Housing Element Update emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within 0.25 mile of an existing or proposed school?	**Housing Element Update:** Potentially significant	**4.7-2a Environmental Site Assessment** (1) Applicability Threshold. Discretionary projects that require grading, excavation, or building permit from LADBS and which meet the criteria below shall comply with the standard in (2): • Located on or within 500 feet of a Hazardous Material site listed on the following databases: o SWRCB GeoTracker (refer to https://geotracker.waterboards.ca.gov); o DTSC EnviroStor (refer to https://www.envirostor.dtsc.ca.gov/public); o DTSC Hazardous Waste Tracking System (refer to https://hwts.dtsc.ca.gov); o LAFD Certified Unified Program Agency (refer to the active, inactive, and historical inventory lists at https://www.lafd.org/fire-prevention/cupa/public-records); o Los Angeles County Fire Department Health Hazardous Materials Division (refer to the active and inactive facilities, site mitigation, and California Accidental Release Prevention inventory lists at https://fire.lacounty.gov/public-records-requests); o SCAQMD Facility Information Detail (refer to https://xappprod.aqmd.gov/find); or • Located on or within 500 feet of a Hazardous Materials site designated as a RCRA Small Quantity Generator or Large Quantity Generator (refer to the USEPA Envirofacts database at https://enviro.epa.gov/index.html); or • Located on an Oil Drilling District or located on or within 50 feet of a property identified as having an oil well or an oil field (active or inactive) by CalGEM (refer to https://www.conservation.ca.gov/calgem/Pages/WellFinder.aspx); or • Located on land currently or previously designated with an industrial use class or industrial zoning, on whole or in part; or • Located on land currently or previously used for a gas station or dry-cleaning facility. Or: • The Applicant or Owner are aware or have reason to be aware that the Project site was previously used for an industrial use, gas station, or dry-cleaner. And: • The site has not been previously remediated to the satisfaction of the relevant regulatory agency/agencies for any contamination associated with the above uses or conditions. (2) A Phase I Environmental Site Assessment (ESA) shall be prepared by a Qualified Environmental Professional in accordance with State standards/guidelines and current professional standards, including the American Society for Testing and Materials (ASTM) Standard Practice for Environmental Site Assessments, to evaluate whether the site, or the surrounding area, is contaminated with hazardous substances from any past or current land uses, including contamination related to the storage, transport, generation, or disposal of toxic or Hazardous Waste or materials. If the Phase I ESA identifies a Recognized Environmental Condition (REC) and/or if recommended in the Phase I ESA, a Phase II ESA shall also be prepared by a Qualified Environmental Professional. The Phase I and/or Phase II ESAs shall be maintained pursuant to the proof of compliance requirements in Section I.D.6 and made available for review and inclusion in the case file by the appropriate regulatory agency, such as the SWRCB, DTSC, or LAFD Hazard Mitigation Program. Any remediation plan recommended in the Phase II ESA or by the appropriate regulatory agency shall be implemented and, if required, a No Further Action letter shall be issued	**Housing Element Update:** Significant and unavoidable **Cumulative:** Significant and unavoidable

Impact Category	Checklist Threshold	Level of Impact Before Mitigation	Mitigation Measure	Level of Impact After Mitigation [3]
			by the appropriate regulatory agency prior to issuance of any permit from LADBS, unless the regulating agency determines that remedial action can be implemented in conjunction with excavation and/or grading. If oversight or approval be a regulatory agency is not required, the Qualified Environmental Professional shall provide written verification of compliance with and completion of the remediation plan, such that the site meets the applicable standards for the proposed use, which shall be maintained pursuant to the proof of compliance requirements in Section I.D.6. **4.7-2b Site Remediation and Health and Safety Plan** For discretionary projects that require site remediation under MM-HAZ 4.7-2a, if contaminants of concern (COCs) are detected above regulatory action levels, the project applicant shall retain a qualified environmental consultant to prepare a Soil Management Plan (SMP). If the project is under regulatory oversight, the SMP shall be submitted to appropriate agencies (such as SCAQMD, DTSC or others) for review and approval prior to the commencement of excavation and grading activities. The SMP shall be implemented during excavation and grading activities associated with the project to ensure that contaminated soils are properly identified, excavated, and disposed of off-site, as follows: • The SMP shall be prepared and executed in accordance with South Coast Air Quality Management District (SCAQMD) Rule 1166, Volatile Organic Compound Emissions from Decontamination of Soil. The SMP shall require the timely testing and sampling of soils so that contaminated soils can be separated from inert soils for proper disposal. The SMP shall specify the testing parameters and sampling frequency. During excavation, Rule 1166 requires that soils identified as contaminated shall be sprayed with water or another approved vapor suppressant or covered with sheeting during periods of inactivity of greater than an hour, to prevent contaminated soils from becoming airborne. Under Rule 1166, contaminated soils shall be transported from the Project Site by a licensed transporter and disposed of at a licensed storage/treatment facility to prevent contaminated soils from becoming airborne or otherwise released into the environment. • During the project's excavation phase, the applicant shall remove and properly dispose of impacted materials in accordance with the provisions of the SMP. If soil is stockpiled prior to disposal, it will be managed in accordance with the Project's Storm Water Pollution Prevention Plan, prior to its transfer for treatment and/or disposal. All impacted soils would be properly treated and disposed of in accordance with SCAQMD Rule 1166. • The project applicant shall commission a site-specific Health and Safety Plan (HASP) to be prepared in compliance with Occupational Safety and Health Administration (OSHA) Safety and Health Standards (29 Code of Federal Regulations 1910.120) and Cal-OSHA requirements (CCR Title 8, General Industry Safety Orders and California Labor Code, Division 5, Part 1, Sections 6300-6719) and submitted for review by the Department of Building and Safety. The HASP shall address, as appropriate, safety requirements that will serve to avoid significant impacts or risks to workers or the public. The HASP shall include emergency contact numbers, maps to the nearest hospital, gas monitoring action levels, gas response actions, allowable worker exposure times, and mandatory personal protective equipment requirements. The HASP shall be signed by all workers involved in the activities associated with the investigation to demonstrate their understanding of the risks of excavation. If remediation is determined to be necessary, the grading permit shall not be issued until the applicable regulatory agency has indicated that further remedial action is not required.	
Hazardous Materials Sites	**Impact 4.7-3:** Will housing development accommodated under the Housing Element Update be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?	**Housing Element Update:** Potentially significant	See **Mitigation Measures 4.7-2(a) and 4.7-2(b)** under *Hazards and Hazardous Materials*.	**Housing Element Update:** Significant and unavoidable **Cumulative:** Significant and unavoidable
Wildland Fire	**Impact 4.7-4:** Would the Housing Element Update expose people or structures, either directly or indirectly, to a significant risk of loss, injury, or death involving wildland fires?	**Housing Element Update:** Potentially significant	See **Impact 4.17-5** under *Wildfire*.	**Housing Element Update:** Significant and unavoidable **Cumulative:** Significant and unavoidable

Impact Category	Checklist Threshold	Level of Impact Before Mitigation	Mitigation Measure	Level of Impact After Mitigation [3]
Hydrology and Water Quality				
Drainage	**Impact 4.8-1:** Would the Proposed Project substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river through the addition of impervious surfaces, in a manner which would impede or redirect flood flows?	**Housing Element Update:** Potentially significant **Safety Element Update:** Less than Significant	**4.8-1 Drainage Pattern Alterations and Flood Control** For any development project that the City has determined based on an expert study will impede or redirect flood flows even with compliance with existing regulations and RCMS, the project shall develop and implement a project-specific Stormwater Pollution Prevention Plan (SWPPP) for compliance with the Clean Water Act's National Pollutant Discharge Elimination System (NPDES) program. The purpose of the SWMP, similar to the SWPPP, is to maintain during construction and operations the existing drainage patterns of the site and vicinity to the maximum extent feasible, to avoid downstream impacts associated with flooding or water quality degradation from ground disturbance during construction. To address the potential for long-term drainage pattern alterations associated with the placement of future development projects in areas where no development is currently present, the SWMP must also include operational and maintenance BMPs; such BMPs may include but would not be limited to the upkeep of landscaped/vegetated swales to dissipate stormwater runoff, or the maintenance (dredging and disposal of accumulated materials) of detention basins placed to capture stormwater runoff resulting from the project.	**Housing Element Update:** Less than significant with mitigation **Safety Element Update:** Less than Significant
Land Use and Planning				
Land Use Plans and Policy Consistency	**Impact 4.9-1:** Would the Housing Element Update cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect?	**Housing Element Update:** Less than significant	No mitigation required.	**Housing Element Update:** Less than significant
Noise				
Temporary Increase in Noise Levels	**Impact 4.10-1:** Would the Housing Element Update result in the generation of a substantial temporary 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?	**Housing Element Update:** Potentially significant	**4.10-1(a) Noise Shielding and Silencing** Power construction equipment (including combustion engines), fixed or mobile, shall be equipped with noise shielding and silencing devices consistent with manufacturer's standards or the Best Available Control Technology. Equipment shall be properly maintained, and the Project Applicant or Owner shall require any construction contractor to keep documentation on-site during any earthwork or construction activities demonstrating that the equipment has been maintained in accordance with manufacturer's specifications. **4.10-1(b) Use of Driven Pile Systems** Driven (impact), sonic, or vibratory pile drivers shall not be used, except in locations where the underlying geology renders alternative methods infeasible, as determined by a soils or geotechnical engineer and documented in a soils report. **4.10-1(c) Enclosures and Screening** All outdoor mechanical equipment shall be enclosed or screened from off-site noise-sensitive uses. The equipment enclosure or screen shall be impermeable (i.e., solid material with minimum weight of 2 pounds per square feet) and break the line-of-sight from the equipment and off-site noise-sensitive uses. **4.10-1(d) Construction Staging Areas** Construction staging areas shall be located as far from noise-sensitive uses as reasonably possible and feasible in consideration of site boundaries, topography, intervening roads and uses, and operational constraints. **4.10-1(e) Temporary Sound Barriers** Sound barriers, such as temporary walls or sound blankets, shall be erected between construction activities and noise-sensitive uses when construction activities are located within a line-of-sight to and within 500 feet of noise-sensitive uses. **4.10-1(f) Project-Specific Construction Noise Study** A Construction Noise Study, prepared by a qualified noise expert to meet the requirements herein, shall be required for discretionary projects in the City located within 500 feet of noise-sensitive land uses and that have one or more of the following characteristics: • Two or more subterranean levels or 20,000 cubic yards or more of excavated material; • Construction duration (excluding architectural coatings) of 18 months or more; • Use of large, heavy-duty equipment rated 300 horsepower or greater; or • The potential for impact pile driving. The Construction Noise Study shall characterize sources of construction noise, quantify noise levels at noise-sensitive uses (e.g., residences, transient lodgings, schools, libraries, churches [or other places of assembly], hospitals, nursing homes, auditoriums, concert	**Housing Element Update:** Significant and unavoidable **Cumulative:** Significant and unavoidable

Impact Category	Checklist Threshold	Level of Impact Before Mitigation	Mitigation Measure	Level of Impact After Mitigation [3]
			halls, amphitheaters, playgrounds, and parks), and identify measures to reduce noise exposure. The Construction Noise Study shall identify reasonably available noise reduction devices or techniques to reduce noise levels to acceptable levels and/or durations including through reliance on any relevant federal, state or local standards or guidelines or accepted industry practices, and in compliance with LAMC standards. Noise reduction devices or techniques may include but not be limited to mufflers, shields, sound barriers, and time and place restrictions on equipment and activities. Each measure in the Construction Noise Study shall identify anticipated noise reductions at noise-sensitive land uses. Project Applicants shall be required to comply with all requirements of Mitigation Measures 4.10-1(a) through 4.10-5(e) in addition to any additional requirements identified and recommended by the Construction Noise Study and shall maintain proof that notice of, as well as compliance with, the identified measures have been included in contractor agreements.	
Permanent Increase in Noise Levels	**Impact 4.10-2:** Would the Housing Element Update result in generation of a substantial 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?	**Housing Element Update:** Potentially significant	**4.10-2 Project-Specific Operational Noise Study** A Noise Study, prepared by a qualified noise expert to meet the requirements herein, shall be required for all discretionary housing developments with roof decks and/or pool decks in the City of Los Angeles concurrent with Design Review and prior to the approval of building permits. The Noise Study shall include: ● Description of pertinent noise regulations. ● Analysis of operational noise generated by the project's roof decks and/or pool decks to noise-sensitive land uses. ● Comparison of noise levels to applicable City thresholds, such as if the project's operational noise would exceed 3 dBA in an unacceptable land use category or 5 dBA in an acceptable land use category per the City's land use compatibility guidelines included in the City of Los Angeles General Plan Noise Element. ● If project noise would exceed City thresholds, identification of mitigation measures to reduce noise to below 3dBA in an unacceptable land use category or 5 dBA in an acceptable land use category to the extent feasible. Mitigation measures may include, but would not be limited to, operational restrictions, sound dampening equipment, or sound walls. ● Each mitigation measure in the Noise Study shall identify anticipated noise reductions at noise-sensitive land uses. ● Applicant/owners shall comply with the mitigation plan and include the measures in construction contracts.	**Housing Element Update:** Significant and unavoidable **Cumulative:** Significant and unavoidable
Groundborne Vibration	**Impact 4.10-3:** Would the Housing Element Update result in generation of excessive groundborne vibration or groundborne noise levels?	**Housing Element Update:** Potentially significant	**4.10-3(a) Vibration Control Plan** For construction activity for discretionary projects involving vibratory rollers or sonic pile drivers within 50 feet of an extremely fragile building (non-engineered masonry) or historical resource (designated or in SurveyLA or other City recognized survey), the Applicant shall prepare a Vibration Control Plan. The Vibration Control Plan requirement shall also apply to use of impact pile drivers within 140 feet of extremely fragile buildings or historical resources or residential structures. The Vibration Control Plan shall be prepared by a licensed structural engineer and shall include methods to minimize vibration, including, but not limited to: ● Use of drilled piles or similar method rather than impact pile driving ● Use of rubber-tired equipment rather than metal-tracked equipment ● Avoiding the use of vibrating equipment when allowed by best engineering practices The Vibration Control Plan shall include a pre-construction survey letter establishing baseline conditions at potentially affected extremely fragile buildings/historical resources. The survey letter shall provide a shoring design to protect the extremely fragile buildings/historical resources from potential damage. At the conclusion of vibration causing activities, the qualified structural engineer shall issue a follow-up letter describing damage, if any, to impacted buildings. The letter shall include recommendations for any repair, as may be necessary, in conformance with the Secretary of the Interior Standards. Repairs shall be undertaken and completed by the Contractor and monitored by a qualified structural engineer in conformance with all applicable codes including the California Historical Building Code (Part 8 of Title 24). A Statement of Compliance signed by the Applicant and Owner is required to be submitted to the Los Angeles Department of Building and Safety (LADBS) at plan check and prior to the issuance of any permit. The Vibration Control Plan, prepared as outlined above shall be documented by a qualified structural engineer, and shall be provided to the City upon request. **4.10-3(b) Vibration Mitigation** For all discretionary projects: ● Impact pile drivers shall be avoided to eliminate excessive vibration levels. Drilled piles or similar methods are alternatives that shall be utilized where geological conditions permit their use. ● Construction activities shall involve rubber-tired equipment rather than metal-tracked equipment.	**Housing Element Update:** Significant and unavoidable **Cumulative:** Significant and unavoidable re construction

Impact Category	Checklist Threshold	Level of Impact Before Mitigation	Mitigation Measure	Level of Impact After Mitigation [3]
			• The construction contractor shall manage construction phasing (scheduling demolition, earthmoving, and ground-impacting operations so as not to occur in the same time period), use low-impact construction technologies, and shall avoid the use of vibrating equipment when allowed by best engineering practices.	
Private Airstrip/Airport Plan	**Impact 4.10.4:** For a project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the Housing Element Update expose people residing or working in the project area to excessive noise levels?	**Housing Element Update:** Less than significant	No mitigation required.	**Housing Element Update:** Less than significant
Population and Housing				
Induce Substantial Population Growth	**Impact 4.11-1:** Will housing development accommodated by the Housing Element Update induce substantial unplanned population growth in an area, either directly (e.g., by proposing new homes and businesses) or indirectly (e.g., through extension of roads or other infrastructure)?	**Housing Element Update:** Less than significant	No mitigation required.	**Housing Element Update:** Less than significant
Displacement of Existing People or Housing	**Impact 4.11-2:** Will the updates to the Safety Element displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?	**Safety Element Update:** Less than significant	No mitigation required.	**Safety Element Update:** Less than significant
Public Services				
Fire Protection	**Impact 4.12-1:** Would the Proposed Project result in a substantial adverse physical impacts associated with the provision of new or physically altered fire protection facilities, need for new or physically altered fire protection facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for fire protection?	**Housing Element Update:** Potentially significant **Safety Element Update:** No impact	**4.12-1(a) Design Plans Review** For discretionary projects with more than 300 units or located in VHFHSZ or SRA areas and where LAFD finds it necessary on the basis that existing regulations are not adequate to avoid risk of fire based on unusual site-specific, area, roadway or project characteristics, prior to the start of construction, design plans shall be submitted to the LAFD that demonstrate the use of construction and design features that reduce fire potential and/or promote containment, including increased spacing between buildings, noncombustible roofs, fire-resistant landscaping, and special irrigation facilities. Design features shall be reviewed and approved by the LAFD prior to project approval. Upon completion of project construction, a diagram of each portion of the property, including access routes and any additional information that might facilitate fire and emergency medical response, shall be submitted to the LAFD. **4.12-1(b) Emergency Access** For discretionary projects with more than 300 units or located in VHFHSZ or SRA areas and where LAFD finds it necessary on the basis that existing regulations are not adequate to avoid risk of fire based on unusual site-specific, area, roadway or project characteristics, during demolition and construction of discretionary projects, access roads and alleyways shall remain clear and unobstructed in order to ensure access for emergency vehicles. If road closures during construction are necessary, prior to the issuance of a building permit for the discretionary project, a detailed Construction Management Plan including street closure information, a detour plan, haul routes, and a staging plan, shall be prepared and submitted to the Los Angeles Fire Department and the Los Angeles Department of Transportation for review and approval. Furthermore, if emergency access gates are provided on a project access road, the gates shall be equipped with approved locking devices for both Los Angeles City and County Fire Departments on both sides of the gate. Signs shall be provided on the project access road. **4.12-1(c) Hillside Fire/Vegetation Management Plan** For discretionary projects with more than 300 units or located in VHFHSZ or SRA areas and where LAFD finds it necessary on the basis that existing regulations are not adequate to avoid risk of fire based on unusual site-specific, area, roadway or project	**Housing Element Update:** Significant and unavoidable **Safety Element Update:** No impact

Impact Category	Checklist Threshold	Level of Impact Before Mitigation	Mitigation Measure	Level of Impact After Mitigation [3]
			characteristics, projects shall have a 200-foot minimum Fuel Management Zone in place, and it shall be cleared annually, around each structure on the project site. A Fire/Vegetation Management Plan for the Fuel Management Zone shall be prepared that requires the following: all-natural vegetation will be thinned out by 70 percent and all dead vegetation, including grass will be maintained at less than four inches in height; if the zone is not irrigated, the area may be covered with chipped biomass four inches deep; no tree limb shall be within 10 feet of a chimney, including outdoor barbeques; trees must be maintained free of dead branches; trees must be limbed up four feet or ⅓ the height of the tree; trees over driveways or roads must be limbed up to 15 feet; the shrub height limit is two feet. Furthermore, the following requirements shall be included in the Fire/Vegetation Management Plan. The following shrubs and trees are highly flammable and shall not be planted on or around the project site: • Sage species (*Salvia* spp.) • Pampas grass (*Cortaderia* spp.) • Cypress (*Cupressus* spp.) • Eucalyptus (*Eucalyptus* spp.) • Juniper (*Juniperus* spp.) • Pine (*Pinus* spp.) • Cedar (*Cedrus* spp.) The following shrubs and trees shall be used for general landscaping to reduce fire hazard associated with flammable vegetation: • Coastal live oak (*Quercus* spp.) • California sycamore (*Platanus racemosa*) • Cottonwood (*Populus fremontii*) • Willow (*Salix* spp.) • Mulefat (*Baccharis salicifolia*) • California bay (*Umbellularia californica*) • California black walnut (*Juglans californica*) • Liquidambar (*Liquidambar styraciflua*) • California lilac (*Ceanothus* spp.) • Toyon (*Heteromeles arbutifolia*) • Mountain mahogany (*Cercocarpus betuloides*) • Holly leaf cherry (*Prunus ilicifolia*) • Dwarf periwinkle (*Vinca minor*) • Grass (*Stipa* spp.) The Fire/Vegetation Management Plan shall be reviewed and approved by the City of Los Angeles Fire Department prior to project approval. **4.12-1(d) Submittal of Plot Plan** For discretionary projects with more than 300 units or located in VHFHSZ or SRA areas and where LAFD finds it necessary on the basis that existing regulations are not adequate to avoid risk of fire based on unusual site-specific, area, roadway or project characteristics, submittal of a plot plan for approval by the LAFD either prior to the recordation of a final map or the approval of a building permit shall be required. The plot plan shall include the following minimum design features: fire lanes, where required, shall be a minimum of 20 feet in width; all structures must be within 300 feet of an approved fire hydrant, and entrances to any dwelling unit or guest room shall not be more than 150 feet in distance in horizontal travel from the edge of the roadway of an improved street or approved fire lane. In addition, the following recommendations by the LAFD relative to fire safety shall be incorporated into the building plans: • Access for Fire Department apparatus and personnel to and into all structures shall be required. • The entrance to a residence lobby must be within 50 feet of the desired street address curb face. • Where above ground floors are used for residential purposes, the access requirement shall be interpreted as being the horizontal travel distance from the street, driveway, alley, or designated fire lane to the main entrance of individual units.	

Impact Category	Checklist Threshold	Level of Impact Before Mitigation	Mitigation Measure	Level of Impact After Mitigation [3]
			• The entrance or exit of all ground dwelling units shall not be more than 150 feet from the edge of a roadway of an improved street, access road, or designated fire lane. No building or portion of a building shall be constructed more than 150 feet from the edge of a roadway of an improved street, access road, or designated fire lane. • The Fire Department may require additional vehicular access where buildings exceed 28 feet in height. • Building designs for multi-storied residential buildings shall incorporate at least one access stairwell off the main lobby of the building; but, in no case greater than 150 feet horizontal travel distance from the edge of the public street, private street or Fire Lane. This stairwell shall extend unto the roof. • Entrance to the main lobby shall be located off the address side of the building. • Any required Fire Annunciator panel or Fire Control Room shall be located within 50 feet of the visual line of site of the main entrance stairwell or to the satisfaction of the Fire Department. • Where rescue window access is required, provide conditions and improvements necessary to meet accessibility standards as determined by the Los Angeles Fire Department. • Fire lane width shall not be less than 20 feet. When a fire lane must accommodate the operation of Fire Department aerial ladder apparatus or where fire hydrants are installed, those portions shall not be less than 28 feet in width. • The width of private roadways for general access use and fire lanes shall not be less than 20 feet, and the fire lane must be clear to the sky. • Fire lanes, where required, and dead ending streets shall terminate in a cul-de-sac or other approved turning area. No dead ending street or fire lane shall be greater than 700 feet in length or secondary access shall be required. • Submit plot plans indicating access road and turning area for Fire Department approval. • Adequate public and private fire hydrants shall be required. • Standard cut-corners will be used on all turns. • Any roof elevation changes in excess of three feet may require the installation of ships ladders. The Fire Department may require additional roof access via parapet access roof ladders where buildings exceed 28 feet in height, and when overhead wires or other obstructions block aerial ladder access. • All parking restrictions for fire lanes shall be posted and/or painted prior to any Temporary Certificate of Occupancy being issued. • Plans showing areas to be posted and/or painted "FIRE LANE NO PARKING" shall be submitted and approved by the Fire Department prior to building permit application sign-off. • Electric Gates approved by the Fire Department shall be tested by the Fire Department prior to Building and Safety granting a Certificate of Occupancy. • All new buildings shall have approved radio coverage for emergency responders within the building based upon the existing coverage levels of the public safety communication systems of the jurisdiction at the exterior of the building. This section shall not require improvement of the existing public safety communication systems. • Helicopter landing facilities are required on all high-rise buildings in the City in accordance with the recently revised Fire Protection Bureau Requirement 10. • Each standpipe in a new high-rise building shall be provided with two remotely located fire department connections (FDCs) for each zone in compliance with NFPA 14-2013, Section 7.12.2.	
Police Protection	**Impact 4.12-2:** Would the Housing Element Update result in substantial adverse physical impacts associated with the provision of new or physically altered police protection facilities, need for new or physically altered police protection facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for police protection?	**Housing Element Update:** Potentially significant	**4.12-2(a) Crime Prevention Unit Consultation** Prior to the issuance of a building permit for a discretionary project with more than 300 units or on a project site of more than 10 acres, the project applicant shall consult with the Los Angeles Police Department's Crime Prevention Unit regarding the incorporation of crime prevention features appropriate for the design of the project, including applicable features in the Los Angeles Police Department's Design Out Crime Guidelines. The crime prevention features recommended by the Los Angeles Police Department's Crime Prevention Unit and agreed to by the project applicant during consultation shall be made part of the project. The plans shall incorporate the design guidelines relative to security, semipublic and private spaces, which may include but not be limited to access control to building, secured parking facilities, walls/fences with key systems, well-illuminated public and semi-public space designed with a minimum of dead space to eliminate areas of concealment, location of toilet facilities or building entrances in high-foot traffic areas, and provision of security guard patrol throughout the project site if needed. These measures shall be approved by the Police Department prior to the issuance of building permits.	**Housing Element Update:** Significant and unavoidable

Impact Category	Checklist Threshold	Level of Impact Before Mitigation	Mitigation Measure	Level of Impact After Mitigation [3]
			4.12-2(b) Security During Construction During construction of discretionary projects with more than 300 units or with more than 10 acres, private security personnel shall monitor vehicle and pedestrian access to the construction areas and patrol the project site, construction fencing with gated and locked entry shall be installed around the perimeter of the construction site, and security lighting shall be provided in and around the construction site. Furthermore, temporary construction fencing shall be placed along the periphery of the active construction areas to screen as much of the construction activity from view at the local street level and to keep unpermitted persons from entering the construction area. Low-level security lighting, and locked entry (e.g., padlock gates or guard-restricted access) shall be provided to limit access by the general public. Regular security patrols during non-construction hours shall also be provided. During construction activities, the contractor shall document the security measures; and the documentation shall be made available to the construction monitor.	
Public Schools	**Impact 4.12-3:** Would the Housing Element Update result in substantial adverse physical impacts associated with the provision of new or physically altered school facilities, need for new or physically altered school facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service or other performance objectives for public schools?	**Housing Element Update:** Potentially significant	The City will continue to collect school facilities fees. No mitigation measures have been identified. Additionally, school construction is under the jurisdiction of LAUSD.	**Housing Element Update:** Significant and unavoidable
Recreation				
Existing Regional Parks or Recreation Facilities	**Impact 4.13-1:** Would the Housing Element Update increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?	**Housing Element Update:** Potentially significant	The City has conducted studies like the *Citywide Community Needs Assessment* and the *Parks Condition Assessment Report* to address issues with recreational facilities and manage the status of current and future recreational facilities. However, due to the lack of available space to develop new parks to serve the anticipated population growth in dense urban areas of the City, feasible mitigation beyond the policies and initiatives included in current City policies/programs and the Housing Element Update to enhance recreational opportunities is not available.	**Housing Element Update:** Significant and unavoidable **Cumulative:** Significant and unavoidable
Recreational and Governmental Facilities	**Impact 4.13-2:** Would the Housing Element Update include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment? **Impact 4.13-3:** Would the Project result in substantial adverse physical impacts associated with the provision of new or physically altered parks, or the need for new or physically altered parks, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios or other performance objectives?	**Housing Element Update:** Potentially significant	The City has conducted the Community Needs Assessment, the Countywide Comprehensive Parks and Recreation Needs Assessment, and has prepared the Parks Condition Assessment Report to address issues with recreational facilities and plans to use these assessments as a way to manage the status of current and future recreational facilities. However, although the Housing Element Update includes policies encouraging the development of park and recreation facilities, there are no planned parks or facilities that would be built in the Housing Element Update and because of the speculative nature of impacts, development of mitigation for the future construction of new parks or park facilities to serve the population accommodated by the Housing Element Update is not feasible at this time.	**Housing Element Update:** Significant and unavoidable **Cumulative:** Significant and unavoidable
Transportation				
Circulation System Programs and Policy	**Impact 4.14-1:** Would implementation of the Housing Element Update conflict with a program, plan, ordinance or policy addressing the circulation system, including transit, roadways, bicycle and pedestrian facilities?	**Housing Element Update:** Potentially significant	**4.14-1 Construction Management Plan** Any discretionary project that LADOT determines will have potential impacts to the circulation system even with application of existing regulatory compliance measures, shall prepare a detailed Construction Management Plan (CMP), including street closure information, detour plans, haul routes, and staging plans shall be prepared and submitted to LADOT for review and approval. The Construction Management Plan will formalize how construction would be carried out and identify specific actions that would be required to reduce effects on the surrounding community. The Construction Management Plan shall be based on the nature and timing of the specific construction activities and other projects in the vicinity of the Project Site, and shall include those elements required by LADOT for the project, which may include but are not limited to the following:	**Housing Element Update:** Less than significant with mitigation

Impact Category	Checklist Threshold	Level of Impact Before Mitigation	Mitigation Measure	Level of Impact After Mitigation [3]
			• Providing for temporary traffic control during all construction activities adjacent to public right of way to improve traffic flow on public roadways (e.g., flag men) • Prohibition of construction worker parking on any adjacent residential streets • Encouragement of carpool/vanpool of workers • Prohibitions on construction-related vehicles parking on surrounding public streets • Prohibitions on construction equipment or material deliveries within the public right-of-way • Accommodation of all equipment on site as feasible • Provisions for temporary traffic control during all construction activities adjacent to public right-of-way to improve traffic flow on public roadways (e.g., flag men) • Scheduling of construction activities, including deliveries, to reduce the effect on peak hour traffic flow on surrounding arterial streets • Rerouting of construction trucks to reduce travel on congested streets to the extent feasible • Provisions of safety precautions for pedestrians and bicyclists through alternate routing and protection barriers and signage • Provisions to accommodate the staging and storage of equipment • Scheduling of construction-related deliveries to reduce travel during commuter peak hours • Obtain necessary permits for any truck hauling from the City prior to issuance of any permit for the project. • Noticing and coordination with any nearby schools that may be affected by construction activities, including deliveries, hauling and other construction transportation, to ensure safety of school children. • Ensuring all feasible safety measures are taken to accommodate safe travel of pedestrian, bicyclists, and other users of the sidewalks around the construction site, including but not limited through the following measures: o Construction staging as to maintain pedestrian access on adjacent sidewalks throughout all construction phases. o Maintaining adequate and safe pedestrian protection, including physical separation (including utilization of barriers such as K-Rails or scaffolding, etc.) from work space and vehicular traffic and overhead protection, due to sidewalk closure or blockage, at all times. o Providing temporary pedestrian facilities adjacent to the Project Site and provide safe, accessible routes that replicate as nearly as practical the most desirable characteristics of the existing facility. o Covered walkways shall be provided where pedestrians are exposed to potential injury from falling objects. o Keeping sidewalk open during construction until only when it is absolutely required to close or block sidewalk for construction staging. o Reopening the sidewalk as soon as reasonably feasible taking construction and construction staging into account.	
CEQA Guidelines	**Impact 4.14-2:** Would implementation of the Housing Element Update conflict or be inconsistent with CEQA Guidelines section 15064.3, subdivision (b)?	**Housing Element Update:** Less than significant	**4.14-2 Transportation Demand Management Program** The Project shall prepare a TDM program to reduce VMT impacts below the City's project threshold to the extent feasible. TDM program elements could include measures such as unbundled parking although the exact measures will be determined when the plan is prepared. The City of Los Angeles requires that the TDM plan be prepared during construction, with the final TDM plan approved by LADOT prior to the City's issuance of the certificate of occupancy for the Project. Implementation of the TDM plan occurs after building occupancy. TDM measures shall include but not be limited to the following examples: TDM strategies applicable for the residential component: Unbundled Parking—Unbundling parking typically separates the cost of purchasing or renting parking spaces from the cost of purchasing or renting a dwelling unit. Saving money on a dwelling unit by forgoing a parking space acts as an incentive that minimizes auto ownership. Similarly, paying for parking (by purchasing or leasing a space) acts as a disincentive that discourages auto ownership and trip-making. TDM strategies applicable if the project includes an office component: Required Commute Trip Reduction Program—This strategy involves the development of an employee-focused travel behavior change program that targets individual attitudes, goals, and travel behaviors, educating participants on the impacts of their travel choices and the opportunities to alter their habits. The program typically includes elements such as a coordinated ride-sharing or carpooling program, vanpool program, alternative work schedule program, preferential carpool parking, guaranteed ride home service, and a	**Housing Element Update:** Less than significant

Impact Category	Checklist Threshold	Level of Impact Before Mitigation	Mitigation Measure	Level of Impact After Mitigation [3]
			program coordinator. The program requires the development of metrics to evaluate success, program monitoring, and regular reporting. TDM strategies applicable for both the office and residential components: Promotions and Marketing—This strategy involves the use of marketing and promotional tools to educate and inform travelers about site-specific transportation options and the effects of their travel choices. This strategy includes passive educational and promotional materials, such as posters, info boards, or a website with information that a traveler could choose to read at their own leisure. It can also include more active promotional strategies such as gamification.	
Design Feature Hazards	**Impact 4.14-3:** Would implementation of the Housing Element Update substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?	**Housing Element Update:** *Construction -* Potentially significant *Highway Safety -* Potentially significant	See **Mitigation Measure 4.14-1** under ***Transportation.***	**Housing Element Update:** *Construction -* Less than significant with mitigation *Highway Safety -* Significant and unavoidable **Cumulative:** Significant and unavoidable
Emergency Access	**Impact 4.14-4:** Would implementation of the Housing Element Update result in inadequate emergency access?	**Housing Element Update:** Potentially significant	See **Mitigation Measure 4.14-1** under ***Transportation.***	**Housing Element Update:** Less than significant with mitigation
Tribal Cultural Resources				
Historical and Tribal Resources	**Impact 4.15-1:** Would the Housing Element Update 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: • 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 • 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 Resource Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe?	**Housing Element Update:** Potentially significant	See **Mitigation Measure 4.4-2** under *Cultural Resources*. **4.15-1(a) Native American Consultation and Monitoring for Discretionary Projects** All cultural resource and tribal cultural resource assessment reports prepared shall include a record search with a study area of no less than 0.5 mile around the project area. Projects conducted in culturally and historically sensitive areas, as determined by a Qualified Archaeologist meeting the Secretary of the Interior's Professional Qualification Standards for Archaeologist, should include a record search with a study area of no less than 1 mile around the project area. Notification shall be provided to California Native American tribes that are traditionally and culturally affiliated with the geographic area of the project site and have submitted a written request to the Department of City Planning to be notified of proposed projects in that area. Should projects have potential to impact cultural resources, as determined during the environmental assessment or Tribal consultation, a Cultural Resources Monitoring Program (CRMP) shall be prepared by Qualified Archaeologist, in consultation with all interested Tribes, provided consultation under AB 52 is not required, prior to the commencement of any and all ground-disturbing activities for the Project, including any archaeological testing. The CRMP will provide details regarding the process for in-field treatment of inadvertent discoveries and the disposition of inadvertently discovered non-funerary resources and shall be consistent with the treatment of unique archaeological resources in PRC 21083.2. **4.15-1(b) Discovery of Potential Tribal Cultural Resources** In the event that Tribal Cultural Resources are discovered during Project activities, whether or not a tribal monitor is present, and there is no CRMP or the CRMP does not cover treatment of inadvertent discovery, all work within a 50-foot buffer of the find shall cease and a Qualified Archaeologist meeting the Secretary of the Interior's Professional Qualification Standards for Archaeology shall assess the find. Tribes that are culturally and historically affiliated with the Project area and have requested consultation shall be notified, should any potential tribal cultural resource be discovered during project implementation. Construction personnel shall not collect or move any tribal resources. Construction activity may continue unimpeded on other portions of the project site. Unless agreed otherwise during the tribal consultation process or in a CRMP, if tribal cultural resources are discovered during construction, the applicant and/or owner shall retain a Qualified Tribal Monitor (as approved by the Tribe) if requested by the Tribe. Any and all archaeological/cultural documents created as a part of the Project (isolate records, site records, survey reports, testing reports, and monitoring reports) should be provided to consulting Tribes. Any tribal cultural resources discovered shall be treated with appropriate dignity and protected and preserved as appropriate with the agreement of the Tribal Representative and in accordance with federal, state, and local guidelines. If not otherwise provided in the CRMP, the Lead Agency and/or applicant shall, in good faith, provide all consulting Tribes the opportunity to consult on the disposition and treatment of resources. The location of the find of tribal cultural resources and the type and nature of the find will not be published, except to provide information to the Qualified Archaeologist, tribal	**Housing Element Update:** Significant and unavoidable **Cumulative:** Significant and unavoidable

Impact Category	Checklist Threshold	Level of Impact Before Mitigation	Mitigation Measure	Level of Impact After Mitigation [3]
			representatives, and public agencies with jurisdiction or responsibilities related to the resources. An agreement will be reached with the Tribal Representative to mitigate or avoid any significant impacts to identified tribal cultural resources. Absent an agreement with the Tribal Representative, as provided in Public Resources Code Section 21083.2, the find should be preserved in place or left in an undisturbed state unless the Project would damage the resource. When preserving in place or leaving in an undisturbed state is not possible, excavation should not occur until testing or studies prepared by a Qualified Archaeologist have adequately documented the recovery of scientifically consequential information from and about the resource. Construction activity may continue unimpeded on other portions of the project site if cleared by the Qualified Tribal Monitor or Qualified Archaeologist. Ground Disturbance Activities in the area where resources were found may commence once the identified resources are properly assessed and processed by a Tribal Representative or, if no Tribal Representative is identified, a Qualified Archaeologist.	
Utilities and Service Systems				
Wastewater Treatment	**Impact 4.16-1:** Would the Housing Element Update require or result in the relocation or construction of new or expanded wastewater treatment facilities, the construction or relocation of which could cause significant environmental effects? **Impact 4.16-3:** Would the Housing Element Update result in a determination by the wastewater treatment provider which serves or may serve the project that it does not have adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?	**Housing Element Update:** Less than significant	No mitigation required.	**Housing Element Update:** Less than significant
Stormwater Drainage	**Impact 4.16-2:** Would the Housing Element Update require or result in the relocation or construction of new or expanded stormwater facilities, the construction or relocation of which could cause significant environmental effects?	**Housing Element Update:** Less than significant	No mitigation required.	**Housing Element Update:** Less than significant
Water Facilities and Supply	**Impact 4.16-4:** Would development accommodated under the Housing Element Update 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 4.16-5:** Would the City would have sufficient water supplies available to serve development accommodated under the Housing Element Update during normal, dry and multiple dry years?	**Housing Element Update:** Less than significant	No mitigation required.	**Housing Element Update:** Less than significant
Electric Power, Natural Gas, or Telecommunication Facilities	**Impact 4.16-6:** Would the Housing Element Update require or result in the relocation or construction of new or expanded electricity, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects?	**Housing Element Update:** Less than significant	No mitigation required.	**Housing Element Update:** Less than significant

Impact Category	Checklist Threshold	Level of Impact Before Mitigation	Mitigation Measure	Level of Impact After Mitigation [3]
Wildfire				
Emergency Response/Evacuation Plan	**Impact 4.17-1:** If located in or near state responsibility areas or lands classified as very high fire hazard severity zones, would housing development accommodated by the Housing Element Update substantially impair an adopted emergency response plan or emergency evacuation plan?	**Housing Element Update:** Potentially significant	**See 4-12.-1b** **4.17-1 Hillside Construction Staging and Parking Plan** For discretionary projects for development located in or adjacent to an SRA or VHFHSZ, where LAFD finds it necessary to add additional conditions above existing regulations to reduce the risk of construction-related activities impairing an emergency response plan or emergency evacuation plan, prior to the issuance of a grading or building permit, the applicant shall submit a Construction Staging and Parking Plan to the Department of Building and Safety and the Fire Department for review and approval. The plan shall identify where all construction materials, equipment, and vehicles will be stored through the construction phase of the project, as well as where contractor, subcontractor, and laborers will park their vehicles so as to prevent blockage of two-way traffic on streets in the vicinity of the construction site. The Construction Staging and Parking Plan shall include, but not be limited to, the following: • No construction equipment or material shall be permitted to be stored within the public right-of-way. • If the property fronts on a designated Red Flag Street, on noticed "Red Flag" days, all workers shall be shuttled from an off-site area, located on a non-Red Flag Street, to and from the site in order to keep roads open on Red Flag days. • During the Excavation and Grading phases, only one truck hauler shall be allowed on the site at any one time. The drivers shall be required to follow the designated travel plan or approved Haul Route. • Truck traffic directed to the project site for the purpose of delivering materials, construction-machinery, or removal of graded soil shall be limited to off-peak traffic hours, Monday through Friday only. No truck deliveries shall be permitted on Saturdays or Sundays. • All deliveries during construction shall be coordinated so that only one vendor/delivery vehicle is at the site at one time, and that a construction supervisor is present at such time. • A radio operator shall be on-site to coordinate the movement of material and personnel, in order to keep the roads open for emergency vehicles, their apparatus, and neighbors. • During all phases of construction, all construction vehicle parking and queuing related to the project shall be as required to the satisfaction of the Department of Building and Safety, and in substantial compliance with the Construction Staging and Parking Plan, except as may be modified by the Department of Building and Safety or the Fire Department.	**Housing Element Update:** Significant and unavoidable
Slope, Prevailing Winds, Flooding, and Landslides	**Impact 4.17-2:** If located in or near state responsibility areas or lands classified as very high fire hazard severity zones, would the project, due to slope, prevailing winds, and other factors, exacerbate wildfire risks and thereby expose project occupants to pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire? **Impact 4.17-4:** If located in or near state responsibility areas or lands classified as very high fire hazard severity zones, would the project expose people or structures to significant risks, including downslopes or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes?	**Housing Element Update:** Potentially significant	See **Mitigation Measures 4.12-1a through Mitigation Measure 4.12-1d** under *Public Services*.	**Housing Element Update:** Significant and unavoidable

Impact Category	Checklist Threshold	Level of Impact Before Mitigation	Mitigation Measure	Level of Impact After Mitigation [3]
Installation Maintenance of Associated Infrastructure	**Impact 4.17-3:** If located in or near state responsibility areas or lands classified as very high fire hazard severity zones, would the Project require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment?	**Housing Element Update:** Potentially significant	**4.17-3 Undergrounding of Power Lines in and Near an SRA and VHFHSZs** For all discretionary applications for development located in or within one mile of an SRA or VHFHSZs, that involve or require the installation of new power lines shall be required to install the new power line underground. Prior to the issuance of a grading or building permit, the applicant shall submit plans for undergrounding of power lines.	**Housing Element Update:** Significant and unavoidable
Expose People or Structures to Risk of Loss, Injury, or Death	**Impact 4.17-5:** Would the Project expose people or structures, either directly or indirectly, to a significant risk of loss, injury, or death involving wildland fires?	**Housing Element Update:** Potentially significant	See **Mitigation Measures 4.12-1a through Mitigation Measure 4.12-1d** under *Public Services*. For all discretionary applications for development located in or near a VHFHSZ or SRA, **see Mitigation Measures 4.17-1 and 4.17-3** under *Wildfire*.	**Housing Element Update:** Significant and unavoidable

3 PROJECT DESCRIPTION

This section describes the Proposed Project, including the project applicant, the project site and surrounding land uses, major project characteristics, project objectives, and discretionary actions needed for approval.

3.1 LEAD AGENCY NAME AND ADDRESS

City of Los Angeles
Department of City Planning
200 North Spring Street, Room 750
Los Angeles, California 90012

3.2 LEAD AGENCY CONTACT PERSON

Cally Hardy, City Planning Associate
City of Los Angeles, Department of City Planning
200 North Spring Street, Room 750
Los Angeles, California 90012
(213) 978-1643

3.3 PROJECT LOCATION

The "Proposed Project", which includes the Los Angeles Citywide Housing Element 2022-2029 Update and rezone program (hereafter referred to as "Housing Element Update") and 2021 Safety Element Update and targeted updates to the Plan for a Healthy Los Angeles (hereafter referred to as the "Safety Element Update"), would apply to the entire geographic area located within the boundaries of the City of Los Angeles (City), which encompasses 467 square miles. Los Angeles is a coastal city, generally surrounded by the San Gabriel Mountains to the north, urban development and the Verdugo Mountains, San Rafael Hills and San Gabriel Valley to the east, and urban development and the Santa Susana Mountains, Santa Monica Mountains and Pacific Ocean to the west and south. The City is highly urbanized and contains a variety of residential, civic, institutional, commercial, industrial, and recreational/open space uses within the communities that comprise the City. Figure 3-1 shows the general boundaries of the City limits in the context of the greater County of Los Angeles area.

A grid system of east-west and north-south roadways, including arterials, collectors, and local streets, provide vehicular access throughout the City. The major freeways and highways providing regional access through the City are Interstate 405 (I-405), Interstate 10 (I-10), Interstate 110 (I-110), Interstate and State

Figure 3-1 Regional Location

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Fig 1 Regional Location

Route 210 and 710, and U.S. Highway 101 (U.S. 101). The Port of Los Angeles, located at the southern end of the City, is a seaport managed by the Los Angeles Harbor Department that occupies 7,500 acres of land and water along 43 miles of waterfront and adjoins the separate Port of Long Beach.

3.4 EXISTING SITE CHARACTERISTICS

Current Land Use Designation and Zoning

The City of Los Angeles is highly urbanized and contains a variety of residential, civic, commercial, industrial, and open space uses within the communities that comprise the city. Land use designations are established by the General Plan Land Use Element, which is comprised of the 35 Community Plans for the Community Plan Areas within the City, which are currently being updated. Figure 3-2 illustrates the boundaries of the Community Plan Areas. Zoning designations are established in the Los Angeles Municipal Code (LAMC) Chapter 1, Article 2. The Housing Element Update would provide for additional capacity for housing development within the City, as further discussed in Section 2.5, *Project Characteristics*. Residential zones established in the LAMC include Suburban (RS), Residential Estate (RE), One-family (R1), Residential Urban (RU), Residential Zero Side Yard (RZ), Residential Waterways (RW1 and RW2), Two-family (R2), Restricted Density Multiple Dwelling (RD), Mobilehome Park (RMP), Multiple Dwelling (R3, R4, and R5), and Residential/Accessory Services (RAS3 and RAS4). The Housing Element Update could potentially result in the rezoning of properties to one of these residential zones and the upzoning of existing lower density residential zones such as R1 zones in order to accommodate the necessary housing growth in the City. Figure 3-3 and Figure 3-4 illustrate the pattern of existing land use designations and zoning throughout the city.

Surrounding Land Uses

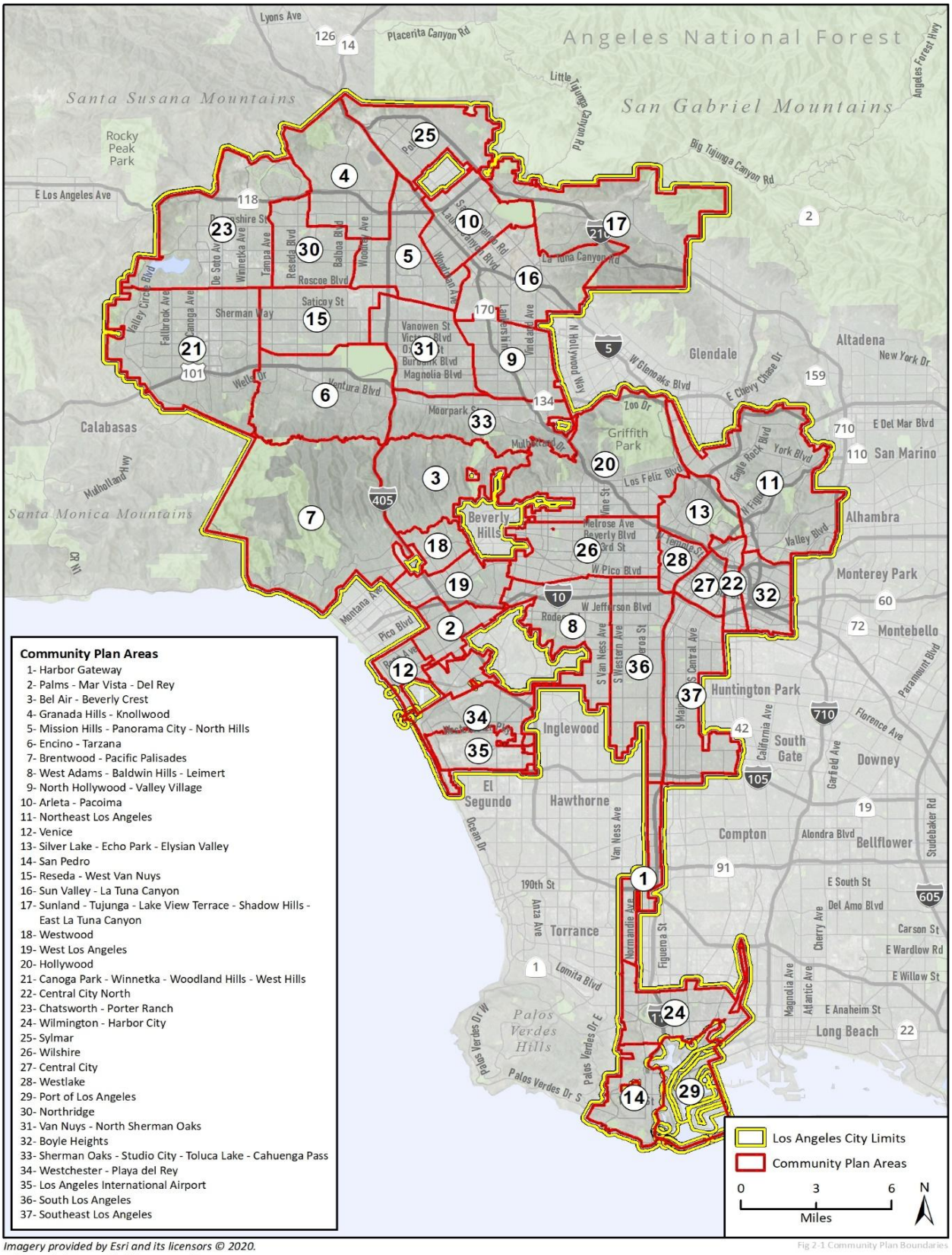
The City is generally surrounded by the San Gabriel Mountains to the north; urban development and the Verdugo Mountains, San Rafael Hills and San Gabriel Valley to the east; and urban development and the Santa Susana Mountains, Santa Monica Mountains and Pacific Ocean to the west and south.

3.5 BACKGROUND

Housing Element Law

The Housing Element is one of the eight State-mandated elements of the General Plan. The Housing Element identifies the City's housing conditions and needs, establishes the goals, objectives, and policies that are the foundation of the City's housing strategy, and provides an array of programs to create sustainable, mixed-income neighborhoods across the City.

Figure 3-2 Community Plan Boundaries



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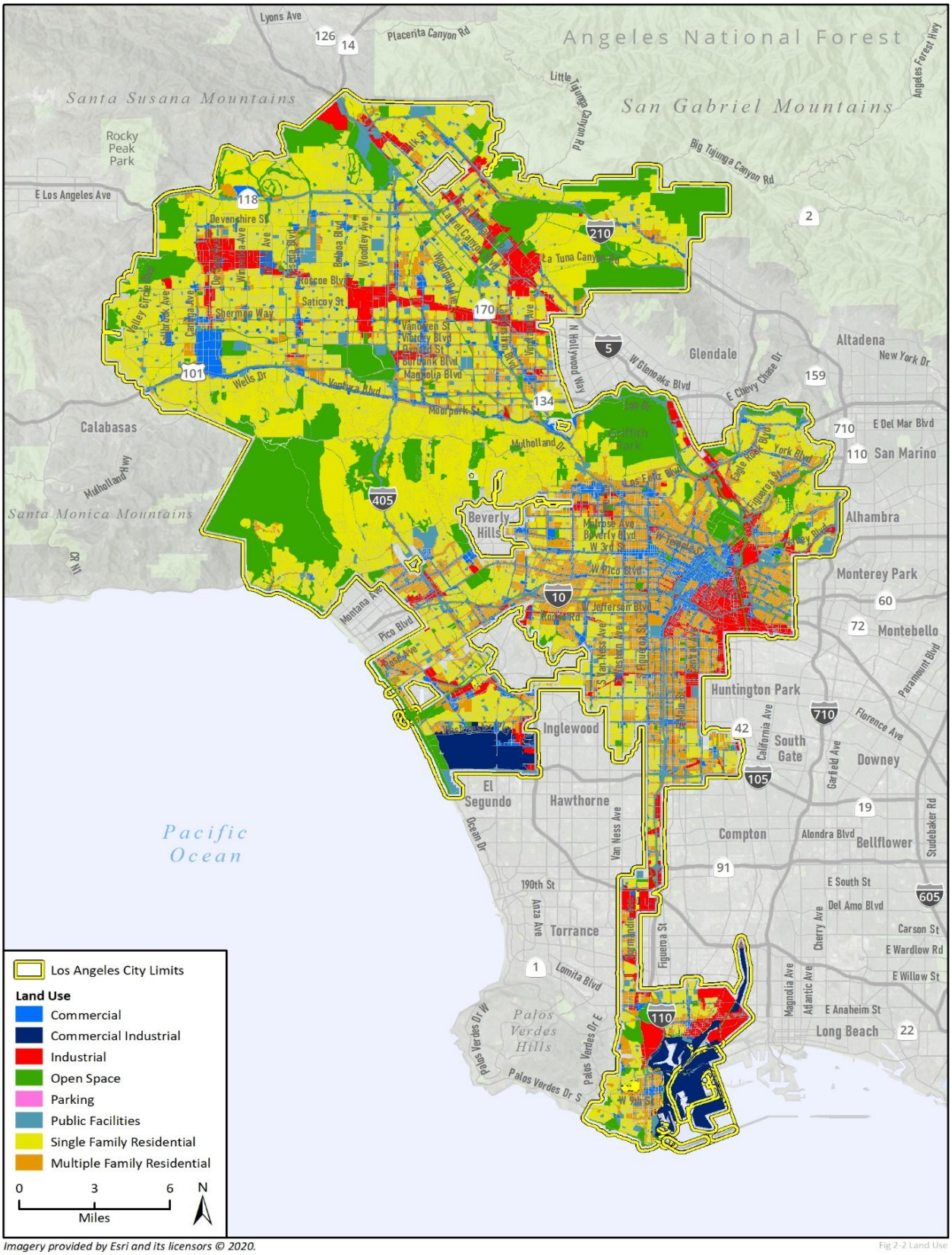
Additional data provided by Los Angeles County, 2020.

Fig 2-1 Community Plan Boundaries

Figure 3-3 Land Use Designations Within the City



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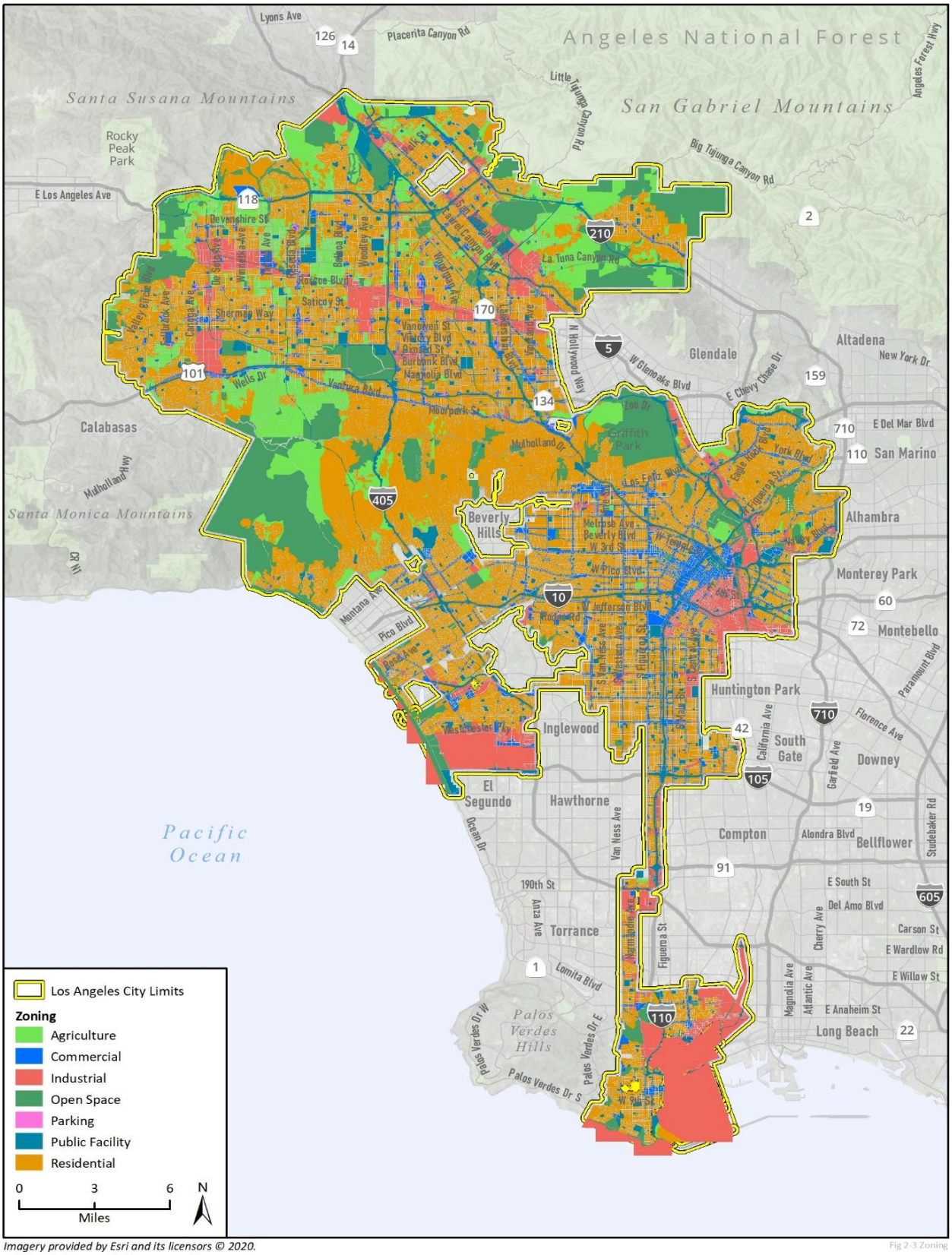
Additional data provided by Los Angeles County, 2020.

Figure 3-4 Zoning Map of the City



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Additional data provided by Los Angeles County, 2020.

Fig 2-3 Zoning

The City's current Housing Element was adopted on December 3, 2013. The element set forth an action plan covering the planning period from 2013 to 2021. The Housing Element identifies the City's housing conditions and needs; reiterates goals, objectives, and policies that are the foundation of the City's housing and growth strategy; and provides the array of programs the City has committed to implement to create sustainable, mixed-income neighborhoods across the City.

The Housing Element Law, enacted in 1969, mandates that local governments adequately plan to meet the existing and projected housing needs of all economic segments of the community through the preparation of a Housing Element. The law requires local governments to adopt land use plans and regulatory systems that provide opportunities for, and do not unduly constrain, housing development. The law requires the update of the Housing Element every eight years to reflect the most recent trends in demographics and employment. Pursuant to these requirements, the City of Los Angeles is required to update the Housing Element. The Housing Element Update would establish new policies, goals and programs for the City to accommodate the City's required housing needs allocation as determined by SCAG in the RHNA. The Housing Element Update is required to be adopted by October 15, 2021 and will be in effect through October 2029.

The Housing Element Law also requires that the Department of Housing and Community Development (HCD) review local housing elements for compliance with State law and report written findings to the local government. The City expects to submit the draft Housing Element to HCD in the summer of 2021. Following release of the draft Housing Element, HCD will provide comments to the City, which will be incorporated in a revised Housing Element that will be submitted to HCD by no later than October 15, 2021.

This study analyzes the programs and policies contained in the draft Housing Element that have the potential to result in physical environmental effects, the Inventory of Sites and Rezoning Program needed to demonstrate zoned capacity needed to accommodate the City's RHNA allocation, in addition to the construction and operation of 420,327 housing units, which is intended to provide a conservative analysis of the "worst-case" scenario of environmental impacts from future implementation of the 2021-2029 Housing Element (see *Proposed Project* section of this introduction).

Since the adoption of the 2013-2021 Housing Element, the California State Legislature adopted several key bills that imposed additional requirements on the Housing Element Update. These recent changes are summarized as follows.

Affirmatively Furthering Fair Housing (AB 686)

Pursuant to Assembly Bill (AB) 686 (2018), the Housing Element must include an analysis and determination of consistency with Affirmatively Furthering Fair Housing (AFFH) requirements. AFFH

means "taking meaningful actions, in addition to combating discrimination, that overcome patterns of segregation and foster inclusive communities free from barriers that restrict access to opportunity based on protected characteristics. These actions must, when taken together, address significant disparities in housing needs and in access to opportunity, replace segregated living patterns with truly integrated and balanced living patterns, transform racially and ethnically concentrated areas of poverty into areas of opportunity, and foster and maintain compliance with civil rights and fair housing laws.

To comply with these requirements, the implementation programs of the Housing Element must affirmatively further fair housing and must include an assessment of fair housing. The City currently has an adopted Assessment of Fair Housing (AFH) plan (adopted in 2017) and anticipates an update to the AFH to be adopted in 2022. Additionally, the Inventory of Sites suitable for housing development must be identified throughout the City in a manner that affirmatively furthers fair housing opportunities.

For purposes of the housing element site inventory, this means that sites identified to accommodate the lower-income portion of the RHNA are not concentrated in low-resourced areas (lack of access to high performing schools, proximity to jobs, location disproportionately exposed to pollution or other health impacts) or areas of segregation and concentrations of poverty. Sites identified to accommodate the lower income RHNA must be distributed throughout the community in a manner that affirmatively furthers fair housing.

To conduct this analysis, the City will utilize the California Tax Credit Allocation Committee (TCAC)/California Department of Housing and Community Development (HCD) Opportunity Maps, which is shown in Figure 3-5 and can be accessed at https://www.treasurer.ca.gov/ctcac/opportunity.asp.

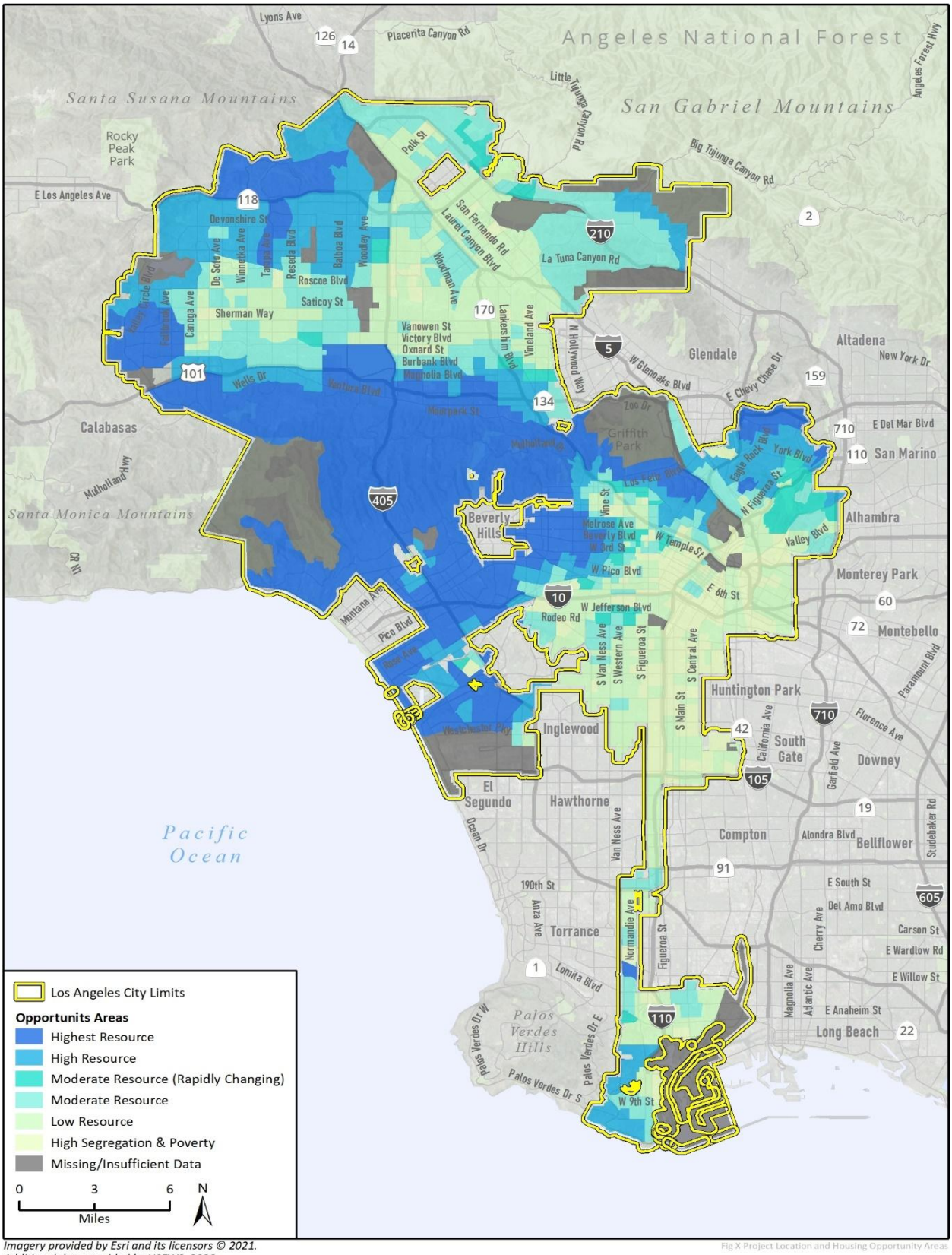
Additional Requirements Related to the Inventory of Sites (AB 1397 and SB 166)

Since the 5th cycle Housing Element was adopted in 2013, the State Legislature has adopted several bills which strengthened requirements related to the Inventory of Sites. Among these, the most significant are AB 1397 (2017) and SB 166 (2017), which imposed several key new requirements. These new requirements are summarized as follows.

Enhanced Requirements: Realistic Development Potential (AB 1397)

Assembly Bill 1397 requires that, for each site included in the inventory, the City identify the realistic development potential for the site within the eight-year planning period. For non-vacant sites, the methodology used to identify realistic development potential must consider factors such as existing uses, past development trends, market conditions, and the availability of regulatory and/or other development incentives.

Figure 3-5 TCAC/HCD Housing Opportunity Areas



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Additional data provided by USFWS, 2020.

Fig X Project Location and Housing Opportunity Areas

Additionally, for jurisdictions such as Los Angeles where non-vacant sites are used to accommodate 50 percent or more of the lower-income RHNA allocation, the non-vacant site's existing use is presumed to impede additional residential development, unless the Housing Element describes findings based on substantial evidence that the use will likely be discontinued during the planning period.

No Net Loss (SB 166)

Senate Bill 166 amended existing No Net Loss Law to require sufficient adequate sites to be available at all times throughout the Housing Element planning period to meet a jurisdiction's remaining unmet RHNA goals for each income category. To comply with the No Net Loss Law, as jurisdictions make decisions regarding zoning and land use, or development occurs, jurisdictions must assess their ability to accommodate new housing in each income category on the remaining sites in their housing element site inventories. A jurisdiction must add additional sites to its inventory if land use decisions or development results in a shortfall of sufficient sites to accommodate its remaining housing need for each income category. In particular, a jurisdiction may be required to identify additional sites according to the No Net Loss Law if a jurisdiction rezones a site or if the jurisdiction approves a project at a different income level or lower density than shown in the sites inventory. Lower density means fewer units than the capacity assumed in the site inventory.

To ensure that sufficient capacity exists in the housing element to accommodate the RHNA throughout the planning period, HCD recommends that jurisdiction create a buffer in the housing element inventory of at least 15 to 30 percent more capacity than required, especially for capacity to accommodate the lower income RHNA. Jurisdictions can also create a buffer by projecting site capacity at less than the maximum density to allow for some reductions in density at a project level.

Rezoning for Re-Use of Sites to Accommodate Lower Income RHNA (20 percent inclusionary, By-right)

Sites identified to accommodate the lower-income RHNA are subject to additional requirements if they were identified in a previous planning period. Generally, these requirements would apply to the use of non-vacant site that was identified in the prior planning period's housing element (i.e., 5th cycle Housing Element), or to the use of a vacant site that was identified in two or more consecutive planning periods (i.e., 5th and 4th cycle Housing Elements).

When sites meeting these conditions are used to accommodate the lower-income RHNA, the jurisdiction's Housing Element must include a program to be completed within three years of the beginning of the planning period to allow residential use by right at specified densities (in Los Angeles, the minimum required density is 30 dwelling units per acre [du/acre]) for housing developments in which at least 20 percent of the units are affordable to lower income households. Sites where zoning already permits

residential "use by right" as set forth in Government Code Section 65583.2 (i) at the beginning of the planning period would be considered to meet this requirement.

Replacement Requirements

Government Code Section 65583.2(g)(3) now requires that the Housing Element include a program to impose housing replacement requirements on certain sites identified in the Inventory of Sites. These replacement requirements would require the replacement of units affordable to the same or lower income level as a condition of any development on a non-vacant site consistent with those requirements set forth in State Density Bonus Law (Government Code Section 65915(c)(3).)

The housing replacement requirements would be required for sites identified in the Inventory of Sites that currently have residential uses, or within the past five years[1] have had residential uses that have been vacated or demolished, and:

- Were subject to a recorded covenant, ordinance, or law that restricts rents to levels affordable to persons and families of low or very low-income, or
- Subject to any other form of rent or price control through a public entity's valid exercise of its police power, or
- Occupied by low or very low-income households.

Required Rezoning to Accommodate Shortfall

If, after completing the Inventory of Sites, the City concludes that there is a shortfall of sites to accommodate the RHNA allocation, then the Housing Element must include a program to identify sites that can be rezoned during the planning period. For any shortfall of sites to accommodate the RHNA, the Housing Element is required to include an inventory of potential sites for rezoning, and those sites must meet the adequate sites requirements in terms of suitability and availability.

Sites identified to meet the rezoning need for a lower-income shortfall must comply with a set of specific parameters, including the requirement that the site:

- Permit owner-occupied and rental multi-family uses by right for developments in which 20 percent or more of the units are affordable to lower income households.
- Permit the development of at least 16 units per site.

[1] For the purpose of this program "previous five years" is based on the date the application for development was submitted.

- Permit a minimum of 20 du/ac.[2]
- Ensure a) at least 50 percent of the shortfall of low- and very low-income regional housing need can be accommodated on sites designated for exclusively residential uses, or b) if accommodating more than 50 percent of the low- and very low-income regional housing need on sites designated for mixed-uses, all sites designated for mixed-uses must allow 100 percent residential use and require residential use to occupy at least 50 percent of the floor area in a mixed-use project.

Following the adoption of the Housing Element, jurisdictions have three years to adopt the rezonings, with some ability for extensions based on specific criteria. For the City of Los Angeles, these rezonings must be completed and adopted by October 2024.

Additional Requirements Related to the General Plan – AB 162 (2007), SB 1241 (2012), SB 99 (2019), AB 747 (2019), SB 1035 (2018), SB 379 (2015), and SB 1000 (2016)

Several recent state laws require the City to make updates to other sections of the General Plan alongside the update to the Housing Element. These laws place a particular emphasis on the Safety Element, with an expanded focus on planning for flooding, wildfires, and climate change impacts. More detail on updates to the Safety Element is described in *Description of Safety Element Update*. Additionally, SB 1000 expands requirements surrounding Environmental Justice. Many of these requirements are met through LA's existing Health and Wellness Element, the Plan for a Healthy LA, but minor amendments may be necessary to ensure full compliance. More detail on these updates is provided in *Description of Plan for a Healthy Los Angeles Update.*

RHNA Allocation

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 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.

On October 15, 2019, HCD issued a final regional determination of 1,341,827 units to the SCAG region for the 6th cycle. The total regional allocation accounts for "projected need" within the region (about 506,000

2 Sites within metropolitan jurisdictions, as defined by Government Code Section 65583.2(c)(3)(B)(iii) and (iv), must permit a minimum of 20 du/acre. In Los Angeles, a minimum density of 20 du/acre is equivalent to the density permitted in the RD2 zone. Sites rezoned to the RD2, RD1.5, R3, R4, R5 and Commercial zones would satisfy this requirement.

housing units) and "existing need" within the region (about 836,000 housing units). The new existing need component is the primary reason the RHNA allocation is much larger for the 6th cycle than for past cycles, and largely reflects housing production needed to accommodate the needs of the existing population within the SCAG region.

SCAG is responsible for preparing the RHNA allocation methodology, which allocates the overall regional allocation (1.34 million housing units) among all SCAG jurisdictions based on the need for housing within each jurisdiction during specified planning periods, as well as other statutory requirements. The main factors included in the allocation methodology are household growth (based on the Connect SoCal, or SCAG Regional Transportation Plan/Sustainable Communities Strategy [RTP/SCS] growth forecast), job accessibility, transit accessibility, and socioeconomic conditions. The current RHNA projection period covers an eight-year period from October 2021 to October 2029.

The RHNA allocation is determined by a number of factors. SCAG estimates the future population within each jurisdiction based upon State Department of Finance projections and knowledge of circumstances particular to the region. The population change is then converted into housing units necessary to accommodate projected population increases. This estimate includes a vacancy rate that reflects a "healthy" housing market, and replacement of existing units that may have been demolished. The estimate of housing needs is then divided into four groups based on income: very-low, low, moderate, and above moderate income based on the income characteristics of the community. Table 3-1 shows the final RHNA allocation for the City of Los Angeles by household income group.

Table 3-1 City of Los Angeles RHNA Allocation

Income Level	Number of Units
Very Low Income*	115,978
Low Income*	68,743
Moderate Income	75,091
Above Moderate Income	196,831
Total RHNA Allocation	456,643
*All Very Low Income and Low Income units must be accommodated on sites with a density of at least 30 du/acre[3]	

[3] A minimum density of 30 du/acre is equivalent to the density permitted in the R3 zone. Sites located in the R3, R4, R5 and Commercial zones would meet this requirement.

Under the RHNA allocation, the City is required to provide the zoned capacity to accommodate the development of at least 456,643 residential units using various land use planning strategies. The City provides capacity for housing through local zoning regulations. The City, however, is not required to physically construct 456,643 units as a result of the RHNA allocation.

Targeted Capacity for Inventory of Sites

As discussed in *Housing Element Law,* state law implicitly requires a sufficient buffer in the Inventory of Sites to accommodate future reductions in the sites identified for affordable housing as they are developed with another use during the eight-year cycle. When this occurs, the City must demonstrate that there are adequate remaining sites to accommodate the affordable units that had previously been identified for that site or face further rezoning requirements.

To ensure that sufficient capacity exists in the housing element to accommodate the RHNA throughout the planning period, HCD recommends that jurisdictions identify a buffer over the required allocation, particularly for the lower-income allocation, for the purposes of creating the inventory of sites. The City has set a target capacity that is 10% higher than the RHNA for lower income units, and 15% higher than the RHNA for moderate income units. The buffers are based on anticipated need for additional capacity, based on anticipated production levels of lower income and moderate income housing units during the planning period.[4] This results in a total target capacity of 203,193 units for lower-income households and a target capacity of 86,355 units for moderate income households.

For these reasons, the City's Inventory of Sites will target identifying a capacity of 486,379 units, of which at approximately 203,193 will be accommodated on sites with a density of 30 du/acre or greater. Table 3-2 shows the City's targeted capacity by income category.

[4]The sites included on the Inventory of Sites have an anticipated development potential that is lower than the maximum zoned capacity on each site, which creates an additional buffer at the site-level.

Table 3-2 City of Los Angeles Target Housing Capacity by Income Category

Income Level	Number of Units
Very Low Income*	127,579
Low Income*	75,617
Moderate Income	86,355
Above Moderate Income	196,831
Target Capacity	486,379

*All Very Low Income and Low Income units must be accommodated on sites with a density of at least 30 du/acre. The targeted number of units shown in this table includes a 10 percent buffer above the Very Low Income and Low Income RHNA Allocation, and a 15 percent buffer above the Moderate income RHNA Allocation.

Safety Element Law

The Project also includes necessary updates to the Safety Element, which are triggered under State law upon the update to the Housing Element. State law requires that a city's general plan include a safety element to address protection of its people from unreasonable risks associated with disasters, including earthquakes, floods, fires, landslides, and other hazards identified by the local community. The safety element must identify hazards and hazard abatement provisions to guide local decisions related to zoning, subdivisions, and entitlement permitting, and should also integrate hazard and risk reduction strategies. In addition, the State recently adopted new legislation that requires safety elements to provide additional information related to flooding, wildfires, emergency evacuation, and climate change. The City reviewed these recent State requirements and several long-range citywide plans and programs that relate to safety, including the existing 1996 Safety Element, the 2018 Local Hazard Mitigation Plan, the 2020 Floodplain Management Plan, Resilient Los Angeles, and LA's Green New Deal. These plans provide much of the content required for the Safety Element to comply with State law. As part of the Proposed Project, relevant material from these plans will be consolidated and summarized for inclusion in the updated Safety Element.

Additional General Plan Law

Environmental Justice Law - SB 1000

The update of two or more general plan elements triggers a State requirement to address environmental justice under the provisions of Senate Bill (SB) 1000. Therefore, the City is required to review existing environmental justice policies to ensure compliance with State law and document the review. The Plan for a Healthy Los Angeles, adopted in 2015, is the General Plan Element that contains the majority of the City's environmental justice policies and programs. As part of the Proposed Project, the City will make a targeted

amendment to the Plan for a Healthy Los Angeles alongside the Safety Element to clarify that in addition to health, wellness and equity goals and policies, it is the general plan element containing environmental justice goals and policies for the City.

3.6 DESCRIPTION OF THE HOUSING ELEMENT UPDATE

Summary of Housing Element Update

Most components of the Housing Element are incorporated to meet the requirements under State law for compliant housing elements. The Proposed Project includes an update to the following six components of the Housing Element:

1. **Housing Needs Assessment** - Provides a comprehensive overview of the City's population, household, and housing stock characteristics, and an analysis of these factors in order to identify housing needs of the variety of household types and special needs across the City. New for the 6th cycle and consistent with the AFFH mandate imposed by AB 686, this component includes a detailed analysis of segregation/integration patterns and disparities in access to opportunity.
2. **Constraints on Housing Maintenance, Improvement, and Development** - Identifies and addresses regulations and conditions that constitute constraints to housing production and preservation, including governmental and nongovernmental regulations, infrastructure requirements and market conditions such as land, construction and labor costs as well as restricted financing availability. New for the 6th cycle, this component also identifies and addresses constraints caused by opposition to housing.
3. **Opportunities for Conservation in Residential Development** - State housing element law requires cities to identify opportunities for energy conservation in residential development. The City has broadened this analysis to include energy conservation, water conservation, alternative energy sources and sustainable development which supports conservation and reduces demand.
4. **Inventory of Sites for Housing** - State housing element law requires the City to show that it has adequate land zoned to accommodate the existing and projected need for housing reflected in the 2021-2029 RHNA allocation. The City's RHNA allocation is 456,643 units, more than five times larger than it was in the previous cycle. In addition, as discussed in *Housing Element Law,* recent changes to state law have established more onerous criteria for site selection to demonstrate adequate zoning capacity that can accommodate the RHNA allocation. As a result, this chapter finds a need to identify a program to rezone some parcels as part of the Project in order to meet state requirements. See additional assumptions in *Description of the Housing Element Update* regarding the Inventory of Sites and Rezoning Program.

5. **Review of the 2013-2021 Housing Element** - Preparation of the Housing Element Update includes the essential step of evaluating the previous 2013-2021 Housing Element in order to identify progress and evaluate the effectiveness of previous policies and programs.
6. **Housing Goals, Policies, Objectives and Programs** - The objectives, policies and implementation programs under each goal lay out the City's approach to alleviating housing needs. These tools aim to create sustainable mixed-use, mixed-income neighborhoods across the City and to provide opportunities for housing, jobs, transit, and basic amenities for all segments of the population. Some goals, policies, objectives, and/or programs are revised, removed, or added to better reflect current housing challenges and priorities, add clarity and consistency, as well as to comply with new state requirements, as discussed in *Housing Element Law*. These revisions also add new or significantly modify existing goals, objectives, policies and programs to also include an added focus or emphasis on the following:
    a. Introduce a set of "citywide housing priorities" into many objectives, policies and programs. These priorities include addressing the housing shortage, advancing racial equity & access to opportunity, protecting Angelenos from displacement, and promoting sustainability & resilience through housing.
    b. Accommodate the RHNA through the Sites Inventory and applicable rezoning program, and plan for an ample amount of housing to alleviate existing housing needs, not just projected (future) growth.
    c. Expand access to opportunity and provide for a more equitable distribution of affordable housing opportunities. This includes revisions to existing objectives, policies and implementation programs that promote housing development near transit and jobs centers, to also include a priority for housing development (and in particular, affordable housing development) in high and highest resource areas (referred to as Higher Opportunity Areas in the plan).[5] Related policies also include an allocation of housing targets across Community Plan Areas to address rezoning for affordable housing densities in more areas of the City.
    d. Prevent displacement and promote housing stability. This includes additional policies and programs to assist tenants facing eviction as well as programs to expand tenant protections and new or revised programs to preserve and replace existing affordable and Rent Stabilization Ordinance (RSO) housing. This also includes a program to comply with new housing replacement requirements for housing development projects located on properties identified in the Inventory of Sites upon adoption of the update (Government Code Section 65583.2(g)(3)).

[5] As defined by the TCAC/HCD Opportunity Maps, which can be accessed at https://www.treasurer.ca.gov/ctcac/opportunity.asp.

e. Introduce more flexible zoning and incentives to provide more "missing middle" type low-scale multifamily development as well as a broader policy to examine and reform exclusionary land use practices and introduce context specific reforms that further citywide housing priorities.

f. Promote climate and disaster resiliency, sustainability and Environmental Justice including promoting disaster and climate resilience in citywide housing efforts.

g. Promote homeless prevention and diversion while expanding access to shelter and housing for persons experiencing homelessness.

h. Coordinate housing regulation and design to increase access to amenities that support public health and wellbeing, contribute to a sense of place and belonging, and fostering livable, resilient, and sustainable communities.

i. Promote the provision of housing that meets the needs of special needs populations in the City, including but not limited to: seniors, seniors with disabilities, people with disabilities, large families (five or more persons), single female-headed households, people living with HIV/AIDS, people experiencing homelessness, and transition-aged youth.

j. Result in reduced vehicle trips by promoting a jobs-housing balance.

The draft Update to the Housing Element may be accessed online at: https://planning.lacity.org/plans-policies/housing-element-update#draft-plan.

Inventory of Adequate Sites for Housing

Background

Under Housing Element law, the City must show that it has adequate land zoned to accommodate the entirety of its 2021-2029 RHNA allocation of 456,643 units. Of these units, a total of 184,721 units must accommodate the City's lower-income RHNA, which means they must be identified on multi-family-zoned sites that have a minimum density of 30 du/acre, or in the R3 or a less restrictive zone. In addition, the Inventory of Sites must demonstrate compliance with AB 686 by incorporating an analysis of how the sites are consistent with AFFH goals.

As stated above, the Inventory of Adequate Sites includes a 10% buffer above the Lower Income RHNA Allocation, and a 15% buffer above the Moderate Income RHNA Allocation. As a result, the Inventory of Adequate Sites and Rezoning Program aim to identify a total capacity of 486,379 units. Of these, the City anticipates identifying 230,902 lower income units on sites that have a minimum density of 30 du/ac.

Recent changes to state Housing Element law have strengthened requirements related to the Inventory of Sites. In particular, AB 1397 (2017) requires that, for each site included in the inventory, the City identify the realistic development potential for the site within the eight-year planning period. For non-vacant sites, the methodology used to identify realistic development potential must consider factors such as existing uses, past development trends, market conditions, and the availability of regulatory and/or other development incentives.

Anticipated Development Potential

The Adequate Sites Inventory presents an inventory of land suitable and available for residential development to meet the City's RHNA Allocation at all income levels.

Per State law, the City's Inventory consists of undeveloped and underdeveloped sites upon which the required number of housing units is reasonably likely to be built during the planning period without the need for any legislative action (such as a zone change) by the City. The Inventory includes sites that were identified through three key components, including expected development potential on vacant and underutilized sites, planned and approved development projects, and non-site-specific development potential that provide additional alternative means of meeting the RHNA. These components, along with their anticipated capacity, are summarized in Table 3-3. In total, the Inventory of Adequate Sites for Housing identifies a total development potential of 266,647 units during the 6th cycle.

Table 3-3 Summary of Adequate Sites for Housing, by Income Category

Component	Lower Income Units	Moderate Income Units	Above Moderate Income Units	Total Units
Vacant and Underutilized Sites				
Expected Unit Potential	19,883	5,243	19,706	44,832
Planned and Approved Projects (Development Pipeline)				
Public Land	5,267	12	2,035	7,314
Warner Center 2035 Specific Plan	0	0	10,491	10,491
Private Development Projects	18,858	1,241	123,971	144,070
Additional Means of Meeting the RHNA – Non-Site-Specific				
ADU Development	27,204	2,720	15,416	45,340
Project Homekey Expansion	4,600	0	0	4,600
Public Land Programs	5,500	4,500	0	10,000
Total Development Potential	**81,312**	**13,716**	**171,619**	**266,647**

As described above, the City's Site Inventory may account for pipeline housing development projects that have not yet been completed during this planning cycle. These include pending, approved or permitted housing development projects that are expected to receive a Certificate of Occupancy (COO) after the beginning of the 2021-2029 planning period. The City conservatively estimates that 144,070 pending, approved or permitted housing development projects that are expected to receive a COO after the beginning of the 2021-2029 planning period and therefore count towards the 6th cycle RHNA need. Of these, approximately 36,316 have already received approval by the City[6] and therefore are not analyzed in this study, except under a cumulative impact analysis.[7] This analysis included units anticipated to result from the data sources shown in Table 3-4.

Table 3-4 City of Los Angeles Pipeline Housing Units Expected to Receive Certificate of Occupancy (COO) During Sixth Cycle

Project Type	Net Units Added	% Units Expected to Reach COO	Units Expected to Reach COO
Active Planning Entitlements	175,907	53%	93,231
Approved Planning Entitlements with No Building Permit	72,537	58%	42,071
By-Right Building Permit Applications (Permit not Issued)	3,713	95%	3,527
Approved Building Permits with No COO (Since March 2020)[9]	5,516	95%	5,240
Total	**257,673**		**144,070**

[6] Since the start of the preparation of this EIR, the estimated number of approved housing units that are expected to count towards completion of the RHNA has increased from 36,316 to 47,312. However, for the purposes of this EIR, the analysis will rely on the lower number that was initially included in the NOP. This results in a more conservative analysis of potential environmental impacts for the purposes of CEQA.

[7] These units would have been cleared under CEQA previously either with a new CEQA clearance, a finding they were previously subject to environmental review in a prior clearance or are exempt, including under a ministerial exemption. They will be considered under cumulative impact analysis unless already constructed and operational.

[8] Based on City Planning analysis of existing pipeline production data, average completion rate.

[9] Building permits issued since March 2020 will still be valid by October 2021 since building permits are valid for 18 months.

Geographic Distribution of Sites Inventory and Build out of the RHNA

For at least two decades, the City of Los Angeles has been pursuing an approach to accommodating long-range growth as established in the Framework Element of the General Plan, first adopted in 1995. The goals and policies of the Framework Element encourage sustainable growth in higher-intensity commercial and mixed-use districts, centers and boulevards, and in proximity to transit. The Housing Element helps to fulfill this strategy.

Although housing is allowed in the City in all residential and commercial zones and some industrial zones (through adaptive reuse rules), the geographic distribution of the identified capacity is largely consistent with that of recent building permit activity and areas of the City that are currently zoned for multi-family and commercial development; however, it is possible that build out of the RHNA occurs in any area where the zoning permits residential uses, including lower density residential sites. Based on the City's existing growth strategy, much of this capacity is identified along commercial corridors and existing multi-family neighborhoods located in proximity to public transportation. A large portion of the anticipated housing development is expected to be located within a Transit Oriented Communities Area, which is defined as the half-mile radius of a Major Transit Stop. Figure 3-6 illustrates the potential geographic locations in which development is likely to occur, including areas zoned for residential use and areas located within a half-mile of a Major Transit Stop. Figure 3-7 illustrates the locations of recently permitted housing development projects, which provide further context regarding geographic areas that are likely to be identified. Figure 3-8 shows the locations of sites identified in the draft Inventory of Adequate Sites for Housing.

Rezoning Program

Anticipated Rezoning Program and Assumptions

Total Rezone Need

The Inventory of Adequate Sites for Housing identifies a total development potential of 266,647 units, which is insufficient capacity to accommodate both the RHNA Allocation of 456,643 units and the target capacity of 486,379 units. As a result, the Housing Element identifies a shortfall at all income levels. This results in an identified total rezoning need of 219,732 units, including rezoning to accommodate a shortfall of 121,881 lower income units, 72,639 moderate income units, and 25,212 above moderate-income units. As a result, the Rezoning Program must create at least 219,732 units of new capacity by October 2024.

Description of Rezoning Program

The Rezoning Program, which must be completed by 2024, will likely be accomplished through updates to the City's Community Plans (Land Use Element), an update to the City's affordable housing incentive programs (including Density Bonus and Transit Oriented Communities), targeted zone changes, updates

Figure 3-6 Residential Zones, City of Los Angeles

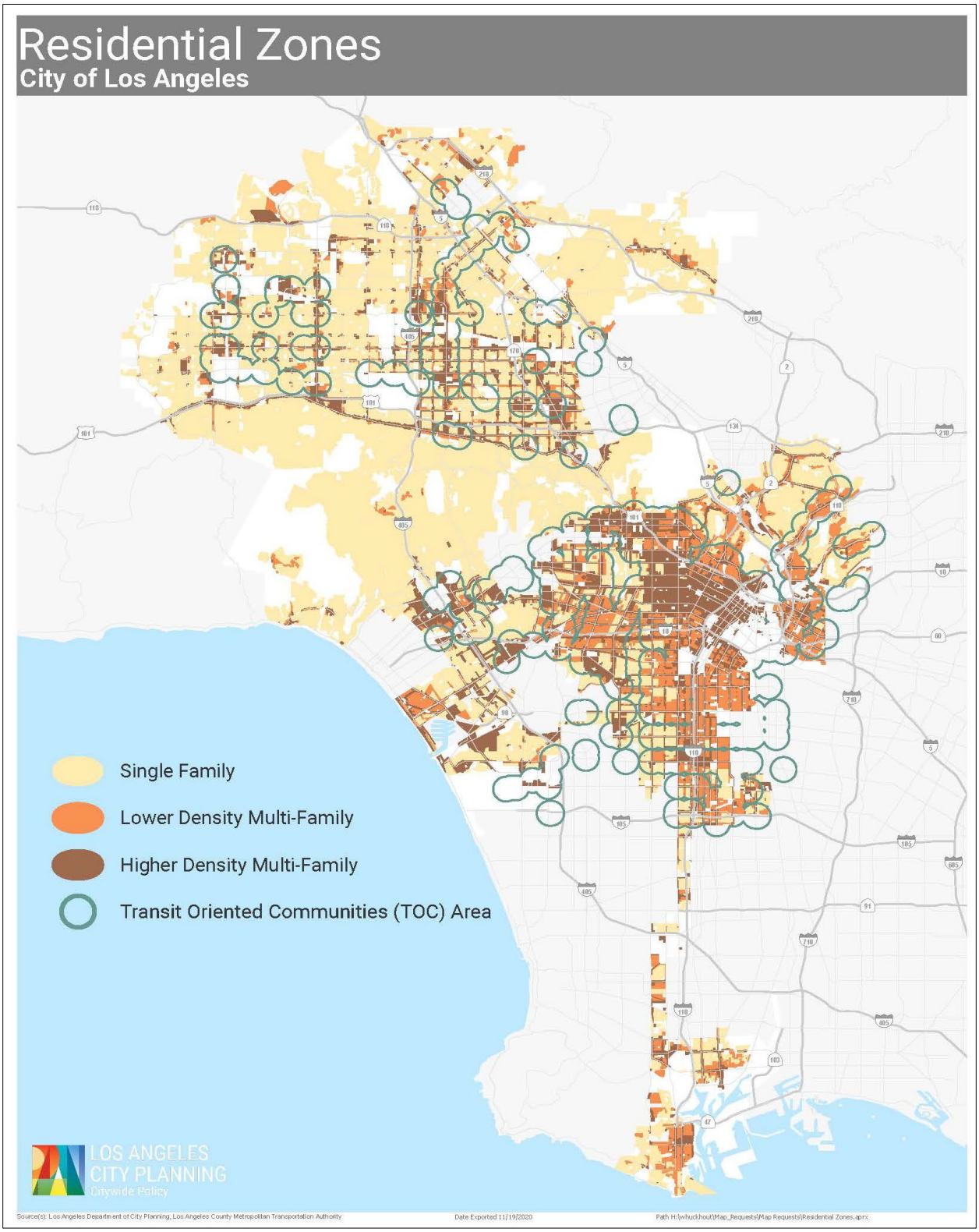


Figure 3-7 Geographic Distribution of City of Los Angeles Permitted Housing Units, 2012-2019

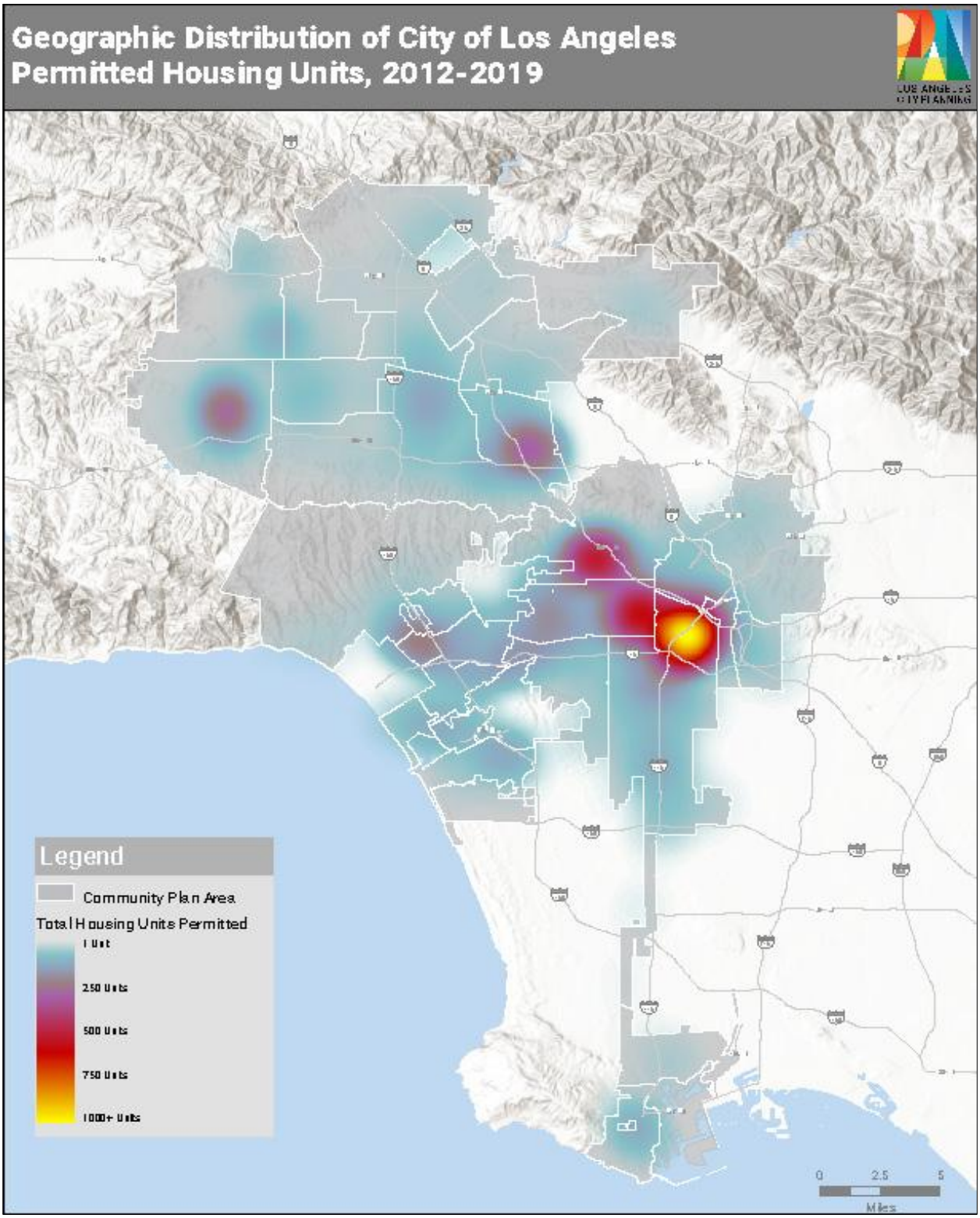
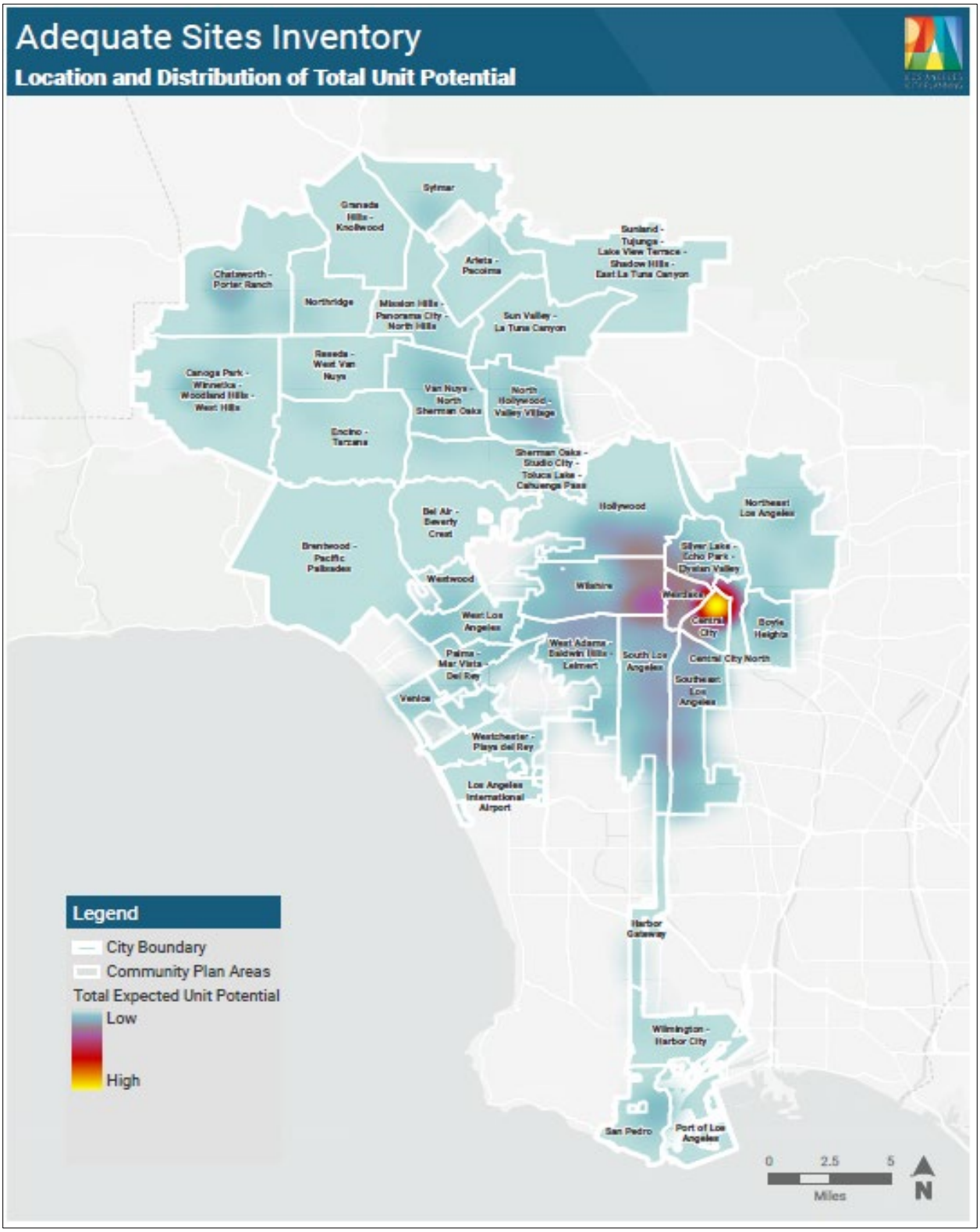


Figure 3-8 Location and Distribution of Expected Unit Potential, Inventory of Adequate Sites for Housing



to specific plans and overlays, or other zoning ordinances or amendments. These programs identify opportunities for rezoning or development incentives in areas that are located in a Transit Priority Area, near major job centers, and in higher resource areas.[10] These programs may also consider rezoning or development incentives in existing lower density residential zones to create opportunities for missing middle housing typologies (up to low-medium residential density) in these areas.

Rezoning programs will do all of the following:

1. **Evaluation and Rezoning to Comply with AFFH Requirements.** Evaluate geographic distribution of identified capacity to determine how well it complies with AFFH requirements; if it is determined that the sites inventory results in an over-concentration of lower-income sites in areas of high segregation and poverty, the rezoning program will work to identify and prioritize areas for upzoning in areas of moderate, high, and highest resource.
2. **Identification of Pending Community Plan Updates and Transit Neighborhood Plans.** Identify existing/planned opportunities for rezoning in forthcoming Community Plan Updates, Transit Neighborhood Plans and Specific Plan Updates. Table 3-5 lists the 12 pending Community Plan Updates, three pending Transit Neighborhood Plans and one pending Specific Plan Update. The geographic locations of the pending plan updates are illustrated in Figure 3-9.
3. **Further Programs for Rezoning.** Identify further actions that will be taken to make sites available during the planning period with appropriate zoning and development standards. Such a program could include, but would not be limited to:
    a. An update to the City's Density Bonus and Transit Oriented Communities (TOC) program, which could include amendments to the City's Zoning Code to:
        i. establish additional development incentives for 100 percent affordable developments and mixed-income projects that provide additional affordability
        ii. expand areas and types of projects where affordable housing incentives apply
        iii. provide incentives for alternative building typologies such as micro-units, adaptive reuse of existing structures, and low- to medium-scale multi-family housing ("missing-middle").
        iv. expand transit-oriented incentives along transit-served commercial corridors
        v. provide incentives for development projects in higher resource areas

[10] Environmentally sensitive areas, including Very High Fire Hazard Severity Zones (VHFHSZ) and areas vulnerable to sea level rise, will be excluded from the citywide Rezoning Program, even if they have overlap with the above-described growth areas and higher resourced areas.

vi. allow affordable housing projects on publicly-owned land, as well as land owned by other entities such as school districts, public and private colleges, religious or faith-based institutions, hospitals, and non-profit organizations.

vii. expand by-right development and objective design standards;

b. An amendment to the City's Zoning Code to permit residential uses in certain Parking (P) Zones and Public Facilities (PF) zones;

c. An update to the City's ADU Ordinance to further facilitate development of ADUs, including deed-restricted affordable ADUs;

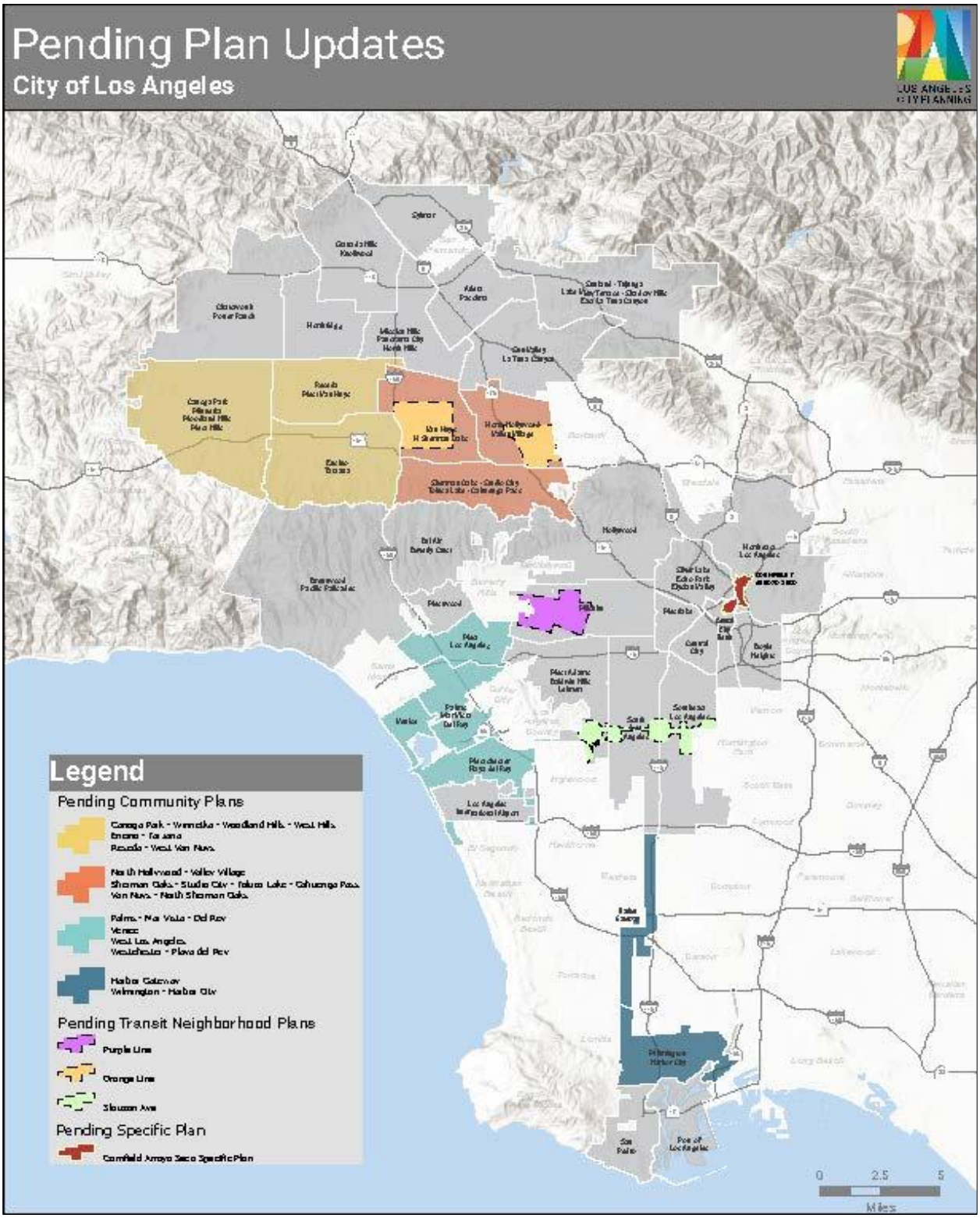
d. Targeted rezones of sites that meet certain criteria, including, but not limited to, proximity to public transportation, jobs, amenities, and higher opportunities; and/or

e. Rezoning of publicly-owned land to facilitate multi-family residential development and affordable housing development, including City-owned land and land owned by public agencies with surplus land suitable for residential development.

Table 3-5 Pending Community Plan Updates, Transit Neighborhood Plans and Specific Plan Updates

Pending Community Plans
Canoga Park-Winnetka-Woodland Hills- West Hills
Encino-Tarzana
Reseda-West Van Nuys
North Hollywood - Valley Village
Sherman Oaks - Studio City - Toluca Lake - Cahuenga Pass
Van Nuys - North Sherman Oaks
West Los Angeles
Westchester-Playa Del Rey
Venice
Palms-Mar Vista-Del Rey
Harbor Gateway
Wilmington - Harbor City
Pending Transit Neighborhood Plans
Purple Line Transit Neighborhood Plan
Orange Line Transit Neighborhood Plan
Slauson Transit Neighborhood Plan
Pending Specific Plan Updates
Cornfield Arroyo Seco Specific Plan (CASP)

Figure 3-9 Pending Community Plan Updates, City of Los Angeles



Anticipated Geographic Distribution of Rezoning Program

As previously described, it is anticipated that a portion of the shortfall will be accommodated through rezoning efforts in the pending Community Plan Updates. Most rezoning is anticipated to occur in geographic areas that are similar to those identified in the Inventory of Sites (i.e. areas near public transit, jobs, in existing growth areas identified in the Framework Element), and in higher resourced areas.

It is reasonably foreseeable that rezoning would occur in areas identified in the General Plan including near transit corridors and stations, job centers, neighborhood services and amenities, and particularly in higher resourced areas to provide a more equitable distribution of housing opportunities. Environmentally sensitive areas, including Very High Fire Hazard Severity Zones (VHFHSZ) and areas vulnerable to sea level rise, will be excluded from the Rezoning Program, even if they have overlap with the above-described growth areas and higher resourced areas.

This distribution aligns with State law regarding AFFH goal of prioritizing the identification of sites in higher resource areas, as indicated on Figure 3-5.

Pursuant to Government Code section 65583.2(h), for any rezoning needed to accommodate a RHNA shortfall, the Housing Element Update will include an inventory of potential sites for rezoning. The inventory of potential sites for rezoning would include specified density ranges that could be achieved through a rezoning program; however, the inventory would not constitute formal adoption of any rezoning. Rezoning would occur as a subsequent discretionary action.

3.7 DESCRIPTION OF UPDATES TO THE SAFETY ELEMENT AND PLAN FOR A HEALTHY LOS ANGELES ("SAFETY ELEMENT UPDATE")

Safety Element

Recent State of California legislation requires that the City of Los Angeles' Safety Element be reviewed and updated as necessary alongside the City's Housing Element 2021-2029 update. The existing City of Los Angeles General Plan Safety Element was adopted in 1996. While the Housing Element is undergoing a comprehensive update, the update to the Safety Element is limited to targeted amendments to bring the element up to date and ensure consistency with legislative mandates and the other General Plan elements.

The following three main components of the Safety Element 2021 targeted update are summarized below:

1. Additions to goals, policies, and objectives to better address climate change;
2. Integration of updated background information and mapping; and
3. Incorporation and update of programs.

The current Safety Element provides three main goals that establish the City's intent to prevent, respond to, and recover from disasters. These goals are supported by three objectives and 18 policies. The City will maintain the current approach of including high level goals and objectives that consider multiple types of hazards as part of this Safety Element update. New State legislation requires that cities include goals, policies, objectives, and feasible implementation measures that place a greater emphasis on wildfires, flooding, and climate change. Wildfire and flooding are topics addressed in the existing Safety Element, though climate change is not considered as explicitly. However, the City addresses climate change adaptation and resilience in other policy documents, such as Resilient Los Angeles, and LA's Green New Deal (Sustainability pLAn). As part of the targeted update to the Safety Element, relevant policies from these other plans will be incorporated into the Safety Element, centralizing information in the City's General Plan and providing a framework for updates to other implementing documents, allocation of resources, and actions required of City staff and collaborating agencies.

The State requires that general plans include background information and supporting exhibits within the safety element to identify potential hazards, including slope instability, seismic risk, flooding, wildland and urban fires, and to identify approaches to climate adaptation and resilience. Information on most of these hazards, including supporting exhibits, is currently included in both the existing Safety Element and 2018 Local Hazard Mitigation Plan. This can create confusion, as the documents are updated on different timelines and maintained by different departments.

To reduce duplication, the City will replace repetitive descriptions and exhibits within the Safety Element with references to the Local Hazard Mitigation Plan, which was last updated in 2018. The information in the 2018 Local Hazard Mitigation Plan has been reviewed and determined to satisfy most State requirements. Where additional information is required to satisfy State mandates, information will be included in the Safety Element Update, or in the next update to the Local Hazard Mitigation Plan, anticipated to begin in 2022. Some additional updates will be made to the background section to integrate other long range planning efforts that have been undertaken since the Safety Element was last updated, including the 2020 Floodplain Management Plan, OneWaterLA 2040 Plan, and amendments to the LAMC such as the Baseline Hillside Ordinance and fire hazard mapping provisions, and other existing efforts as identified.

General plans typically include identification of city programs that implement the high-level vision set in the goals and policies chapter. The current Safety Element does not include a distinct listing of programs,

instead describing more generally that policies are implemented by different City departments responsible for public safety and emergency response. These current programs do not include implementation details, such as targets and timelines. The updated Safety Element will incorporate programs from the 1996 Safety Element, the 2018 Local Hazard Mitigation Plan, the 2020 Floodplain Management Plan, Resilient Los Angeles, LA's Green New Deal and other related plans into a revised Chapter 4, Implementation, that includes a table of programs that implement one or more policies.

Plan for a Healthy Los Angeles

In 2015, the City adopted the Plan for a Healthy Los Angeles as the Health and Wellness Element of the General Plan. The development of the Plan built on the Health Atlas for the City of Los Angeles (2013), which provided a data-driven methodology for identifying and addressing key health issues and outcomes in Los Angeles and helped inform the Plan's outreach efforts, policies, and goals. This update will provide revised Health Atlas maps with 2019 data. These maps will continue to be advisory and not a formal portion of the City's General Plan.

In 2016, California's SB 1000 established environmental justice requirements for general plans under Government Code Section 65302(h). The Department of City Planning has evaluated the requirements of SB 1000 and determined that the Plan for a Healthy Los Angeles satisfies the requirements of the legislation. The Plan introduction will be updated to describe the Element's consistency with SB 1000.

Some additional targeted amendments will be integrated. This includes updating references to General Plan elements that have undergone an update and adoption since the Plan for a Healthy LA was adopted in 2015, including the Mobility Plan and 2021-2029 Housing Element. A limited number of new programs may be added to reflect relevant departmental work efforts. Given that the targeted amendments to the Plan for a Healthy LA are technical in nature, and are primarily intended to clarify the plan's relationship to requirements imposed by SB 1000 while making no changes to the overall policy framework of the document, this portion of the Proposed Project is not anticipated to have any environmental impacts and is therefore not analyzed in the impact analysis of this EIR.

The draft Updates to the Safety Element and a listing of amendments to the Plan for a Healthy Los Angeles may be accessed online at: https://planning.lacity.org/plans-policies/community-plan-update/general-news-item/draft-safety-element-and-plan-healthy-la

3.8 "PROPOSED PROJECT"

For purposes of this EIR, the Housing Element Update and the Safety Element Update (inclusive of the technical amendments to the Plan for a Healthy Los Angeles) are the "Proposed Project." The Proposed Project is analyzed in this EIR unless otherwise scoped out in the Initial Study (See Appendix "A"). Although discussed more fully above, below is a general overview of the Housing Element Update and the assumptions used in this EIR for the Housing Element Update.

Housing Element Update

The Proposed Project involves an update to the Housing Element of the City of Los Angeles General Plan. As described in *Description of the Housing Element Update*, the proposed Housing Element Update establishes programs, policies and actions to generally further the goal of meeting the existing and projected housing needs of all family income levels of the City, and to accommodate the RHNA allocation through the year 2029, as established by SCAG.

Under State Housing Element law, the Project is required to demonstrate the zoned capacity needed to accommodate the development of the RHNA allocation using various land use planning strategies. The City provides capacity for housing through local zoning regulations. The City, however, is not required to physically construct 456,643 units as a result of the RHNA allocation.

This project takes a conservative approach by analyzing the reasonable "worst case" scenario of environmental impacts from future implementation of the 2021-2029 Housing Element, which is the full build-out of the City's RHNA allocation. The most significant potential impact under this approach is the potential construction and operation of 420,327 housing units (hereafter referred to as "build out of the RHNA" or "housing development accommodated by the Housing Element Update"), which represents the City's RHNA allocation of 456,643 units, less the 36,316 already approved pipeline housing units expected to receive a COO during the 6th cycle.[11] The RHNA allocation represents the City's housing goal over the eight-year planning period. Although Chapter 1 of the Housing Element provides quantified objectives which reflect the number of housing units that the City estimates are anticipated to be constructed, rehabilitated or conserved/preserved through implementation of all of the Housing Element programs, that estimate reflects a reasonable target goal based on needs, resources, and constraints, and does not represent the maximum number of units that may be constructed during the planning period. Analyzing the

[11] Since the start of the preparation of this EIR, the estimated number of approved housing units that are expected to count towards completion of the RHNA has increased from 36,316 to 47,312. However, for the purposes of this EIR, the analysis will rely on the lower number that was initially included in the NOP. This results in a more conservative analysis of potential environmental impacts for the purposes of CEQA.

production of 420,327 units is intended to provide a conservative analysis of the reasonable worst-case scenario of environmental impacts from future implementation of the 2021-2029 Housing Element.

These units may occur anywhere in the City where residential uses are permitted, as described below. While some units are anticipated to be built on the Opportunity Sites identified in the Housing Element Inventory of Adequate Sites, it is not reasonable to expect that housing development will occur solely on those Opportunity Sites. Housing may occur on any site that is currently zoned for residential use; whereas the Opportunity Sites are subject to a number of requirements to demonstrate realistic likelihood of development and are intended to demonstrate existing zoned capacity to accommodate the City's RHNA allocation (see *Background).* In addition, these units may also occur on sites that do not currently allow residential uses or multi-family residential uses of adequate density and will be rezoned in the future under a Housing Element rezoning implementation program (i.e., Rezoned Sites).

The anticipated 420,327 units may occur in any of the following types of development:

- Multi-family residential development, ranging from small apartment buildings with two to 10 units, medium apartment buildings with between 11-49 units, large apartment buildings with between 50-200 units, or larger apartment buildings and high-rise structures with more than 200 units;
- Single-family residential development ranging in size and scale from smaller single-family homes to larger single-family homes, small-lot subdivisions, and new single-family subdivisions;
- ADUs including attached ADUs, detached ADUs, Junior ADUs, ADUs converted from existing floor area, multiple ADUs on lots with existing multi-family dwellings, and Movable Tiny Houses;
- Mixed-use development, ranging in size and scale from neighborhood commercial mixed use with smaller nonresidential uses, to high-rise mixed-use with larger nonresidential uses; and
- Conversion and/or rehabilitation of existing nonresidential, residential and mixed-use structures to be used for housing.

This housing may also include single room occupancies or supportive housing for those with disabilities or those experiencing homelessness. In addition to the general areas shown in Figure 3-6 and Figure 3-7, these units may occur in any of the following types of locations:

- Sites currently zoned for residential uses, including multi-family and single-family uses;
- Sites currently zoned for commercial uses, which permit residential uses;
- Sites currently zoned for hybrid industrial uses, which permit joint live-work residential uses;
- Non-vacant sites, and sites with existing housing units;
- Sites located near public transportation;

- Sites located in a Historic Preservation Overlay Zone; and
- Sites located in areas with special environmental considerations, such as areas located near Open Space, Hillside Areas, Very High Fire Hazard Severity Zones (VHFHSZ), or the Coastal Zone.

While housing development may generally occur in any of the conditions previously described, certain types of housing development and certain types of locations are anticipated to be more prevalent than others. These assumptions are made and supported by an analysis of the types and locations of housing development that have historically been permitted in the City.[12] Based on this analysis, the City conservatively estimates that of the 420,327 units expected to be developed by 2029, they are expected to occur in the following types of housing projects shown in Table 3-6.

Table 3-6 Anticipated Housing Units, by Type of Development

Housing Type	Share of Total Permit Activity (%)	Anticipated Number of Housing Units
Single-family and duplex (including ADUS)	18.3%	76,920
Multi-family	50.3%	211,424
Mixed-use	31.4%	131,983
Total	**100.0%**	**420,327**

3.9 PROJECT OBJECTIVES

The underlying purpose of the Project is to accommodate the Regional Housing Needs Assessment compliant with State law and consistent with the City's General Plan.

- Meet the City's fair share of the regional housing need to accommodate projected population growth and meet existing housing needs within the city
- Increase the availability of affordable housing and the variety of housing options within the city
- Promote concentrated housing growth in High and Very High Resource areas and in areas with good access to jobs, services, and high-quality public transit
- Strengthen the City's goals, policies, objectives and programs that prevent displacement, promote homeless prevention and diversion, and promote housing stability
- Strengthen the City's goals, policies, objectives and programs that reduce greenhouse gas emissions and promote climate resiliency
- Update the City's Safety and Health Elements to be consistent with current State regulations

[12] Based on analysis of building permits issued for housing development projects from 2009 to 2019 in the City of Los Angeles.

3.10 REQUIRED APPROVALS

The project requires the following discretionary approvals from the City:

- Adoption of the 2021-2029 Housing Element Update
- Adoption of the Safety Element Update
- Adoption of targeted amendments to the Plan for a Healthy LA
- Certification of the 2021-2029 Housing and Safety Element Update EIR
- Technical amendments to other General Plan Elements, including but not limited the Framework Element and other elements as needed to ensure consistency with the updated Housing and Safety Elements
- Future Legislative Actions to Implement Programs, including rezoning program, to comply with State law.
- Review of the draft 2021-2029 Housing Element Update by HCD to determine compliance with state law and submittal of written findings to the City.
- Review of the draft amendments for the Safety Element Update by California Geological Survey, California Office of Emergency Services, California State Board of Forestry and Fire Protection, and the Federal Emergency Management Agency to determine compliance with State law.

4 ENVIRONMENTAL ANALYSIS

INTRODUCTION TO THE ANALYSIS

This chapter, *Environmental Analysis*, is the primary focus of this Draft EIR. The following Sections 4.1 to 4.17 contain discussions of the potential environmental effects of implementation of the Housing Element Update and Safety Element Update (Proposed Project). This section provides a summary of the approach to the impact analysis and mitigation measures, including the types of housing that are analyzed and previous projects that are referenced as case studies for this EIR. Each environmental issue is considered in a separate section, each of which contains a discussion of the environmental setting, regulatory setting, methodology, and thresholds of significance applicable to the environmental issue being analyzed. Each section also includes analysis of the project's environmental effects, mitigation measures, conclusions regarding the level of significance after mitigation, and discussion of cumulative impacts.

SCOPE OF IMPACTS AND MITIGATION

Environmental Issue Areas

In the following sections, the analysis considers the potential impacts associated with the Housing Element Update and/or Safety Element Update for the following environmental issue areas:

- 4.1 Aesthetics
- 4.2 Air Quality
- 4.3 Biological Resources
- 4.4 Cultural Resources
- 4.5 Geology and Soils
- 4.6 Greenhouse Gas Emissions
- 4.7 Hazards and Hazardous Materials
- 4.8 Hydrology and Water Quality
- 4.9 Land Use and Planning
- 4.10 Noise
- 4.11 Population and Housing
- 4.12 Public Services
- 4.13 Recreation
- 4.14 Transportation
- 4.15 Tribal Cultural Resources
- 4.16 Utilities and Service Systems
- 4.17 Wildfire

Anticipated Housing Types

To analyze the impacts from build of the RHNA, in addition to impacts from full build out of the RHNA, the EIR considers foreseeable impacts from the various housing types that would be accommodated by the

Housing Element Update. Each environmental issue area analyzes the potential impacts that are anticipated for each of the following housing types:

- Multi-family residential
- Single-family residential
- Accessory dwelling units (ADU)
- Mixed use development
- Conversion and/or rehabilitation

The aforementioned housing types would vary in size, scale, and location and therefore may lead to different environmental impacts, depending on the type of housing proposed. For example, a 1-10 unit single-family residential projects in hillside areas are more likely to require substantial earthwork/ground disturbance, be located in a high fire severity zone, alter existing drainage patterns, and/or conflict with provisions protecting natural/cultural resources, as opposed to a 200-unit multi-family residential development on an infill site in the urban core where development has already occurred and potentially significant impacts tend to be related to the loss of or disruption to cultural/historic resources and the degradation existing resources. Each section of this EIR discusses the specific environmental issue with respect to the resources environmental setting, as relevant to the impact analysis, a description of these five housing types and where they are typically located, within the overall general framework of the specific resource. For example, exposure to and generation of hazards and hazardous materials is less likely to occur in single-family residential areas due to the land use type and circulation patterns of the City, while the potential for exposure is more likely for a mixed-use development where commercial developments utilizing minor amounts of materials may be integrated with housing. This EIR analyzes each of these housing types and identifies the anticipated significance determination under individual the environmental issue areas. While a single significance determination is made for an impact, as a result of implementing the proposed project, this EIR intends to illustrate the types and severities of the environmental impacts for each housing type. If one of the five housing types may result in a significant and unavoidable and all other housing types are expected to result in less than significant impacts, this EIR still presents the overall impact determination of the proposed project as significant and unavoidable.

In addition, other types of reasonably foreseeable development include single-resident occupancy and affordable housing that may be for families, seniors, residents with special needs or permanent supportive housing (hereafter referred to as "supportive housing"). Overall, the potential impacts associated with supportive housing developments would be similar in scope to market-rate multi-family and mixed-use projects that would be located in urban areas of the City, which will be discussed in detail in Sections 4.1

through 4.17 of this EIR. The primary difference would be that the parking requirements for supportive housing developments would be less in comparison to market-rate developments. In all situations where supportive housing would result in lower parking requirements, the decrease in the need for aboveground or subterranean parking levels would result in fewer construction impacts associated with air quality and GHG emissions, noise and vibration, and the need for water and energy resources. In situations where parking levels would be aboveground, the reduction in levels for supportive housing would result in decreased aesthetic impacts associated with building heights. In situations where a project would include subterranean parking levels, the decrease in impacts for supportive housing would be associated with the potential to disturb unknown archaeological, paleontological and tribal cultural resources. Therefore, the potential impacts discussed in Sections 4.1 through 4.17 of this EIR will address the impacts associated with the various types of housing development accommodated under the Housing Element Update.

Analysis of impacts from the various housing types was determined in part from review of historical development projects and case studies as further discussed in Section 4.4 below.

Approach to Mitigation of Potential Impacts

This EIR addresses citywide housing development with a variety of projects spread over a period of eight years. Mitigation measures were developed through review of historical housing projects of the various housing types that occur in the City (see discussion of Sample Projects discussed below), the EIRs and MNDs prepared for these various types of housing projects, and adopted Mitigation and Monitoring Programs. To the extent feasible, mitigation measures were identified to mitigate the impacts identified in this EIR, which those impacts that result from housing projects and/or housing projects, including those with site specific conditions that are encountered in development in the City (such as, sites with contaminated soil, sites with abandoned oil wells, on-site historical resources, or biological resources that may be encountered in the hillsides).

Sample Projects

Table 4-1 and Table 4-2 provide summaries of CEQA documents that have been reviewed for the purpose of presenting impact analyses that are generally consistent with the findings and mitigation measures for the types of housing projects that have occurred throughout the City in the past five years. These case studies from existing and historical environmental documents are used throughout the EIR analysis as examples of potential impacts that are likely to occur from the development of housing that would be accommodated under the Housing Element Update. The City relied on environmental review of historical development projects because the type of housing the City anticipates to build out the RHNA is the same as the housing development projects the City has approved and reviewed. The City reviews hundreds of

housing development projects every year and prepares hundreds of categorical exemptions and negative declarations, and more than one hundred mitigated negative declarations, environmental impact reports, sustainable communities project exemptions (SCPE), and/or sustainable communities environmental assessments (SCEA) each year. To determine the potential impacts from housing development accommodated by the Housing Element Update, the City pulled a representative sample of 54 published mitigated negative declarations, EIRs, and SCEA. Table 4-1 shows the number of projects with significant and unavoidable impacts, indicating that multi-family projects with 100 or more units and projects on developed sites tend to result in the highest number of significant and unavoidable impacts. Table 4-2 is a matrix of the projects that have been reviewed and referenced where applicable in Sections 4.1 through 4.17 of the EIR. In addition, the location of projects included in Table 4-2 are shown graphically in Figure 4-1. All published documents for the projects listed in Table 4-2 or any other environmental clearance discussed in this EIR may be found at the City's website: https://planning.lacity.org/development-services/environmental-review/published-documents.

Figure 4-1 Locations of Previous City of Los Angeles Housing Projects

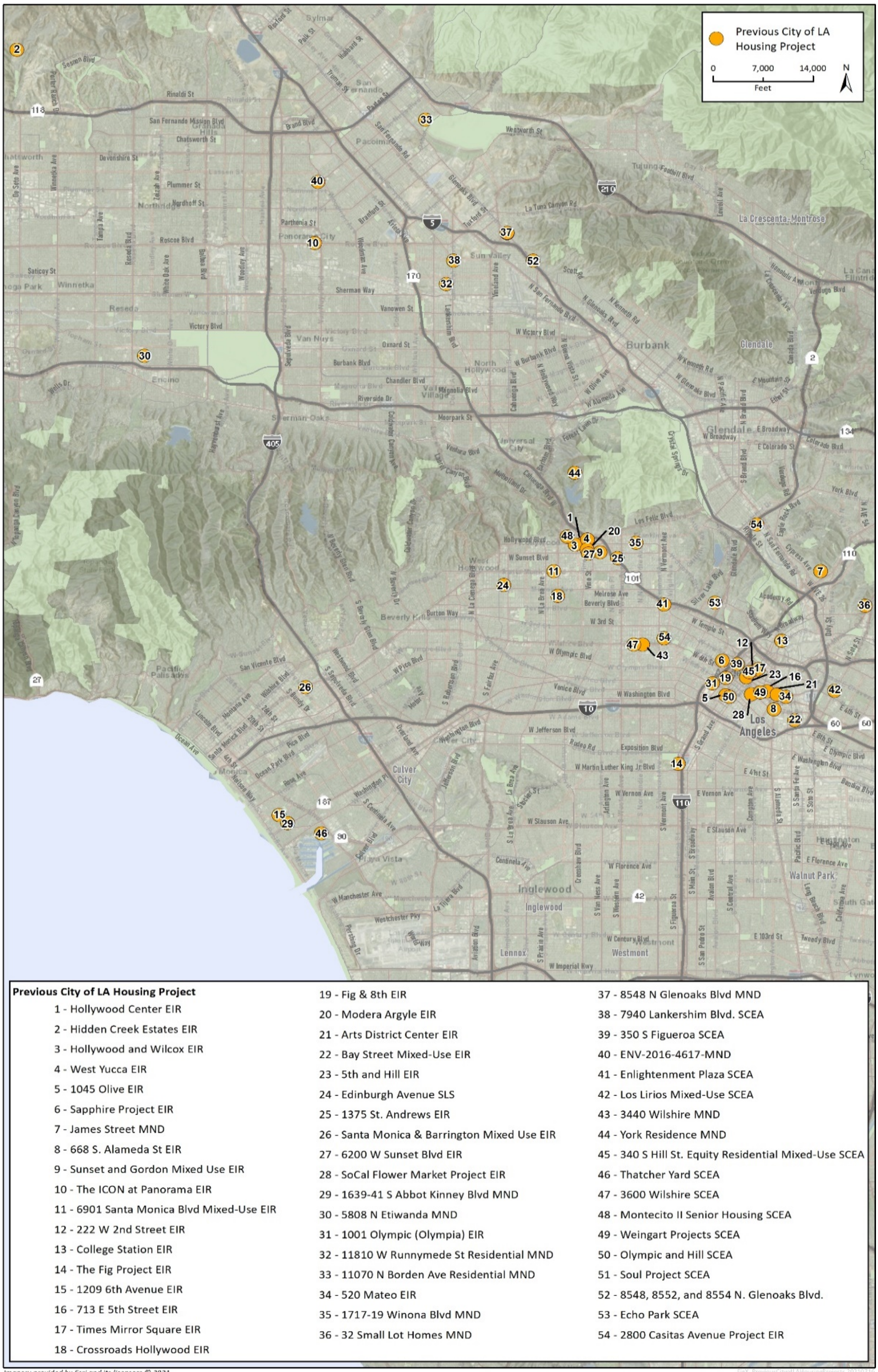


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Table 4-1 Summary of CEQA Projects and Significant & Unavoidable Impacts

Project Type[1]	Total Projects	Aesthetics	Air Quality	Cultural Resources	Land Use & Planning	Noise	Transportation
		Number of Projects with Significant & Unavoidable Impacts					
Large MF on Vacant Site	3	-	1	-	-	1	-
Large MF on Developed Site	33	2	3	5	1	18	10
Small MF on Vacant Site	2	-	-	-	-	-	-
Small MF on Developed Site	7	-	-	1	-	-	-
SF on Vacant Site	5	-	1	-	-	-	-
SF on Developed Site	4	-	-	2	-	-	-
Total	**54**	**2**	**5**	**8**	**1**	**19**	**10**

[1] MF = Multi-Family; SF = Single-Family; Large = Greater than 100 Dwelling Units; Small = 100 or fewer Dwelling Units

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Table 4-2 Previous City of Los Angeles Housing Projects & CEQA Impact Determinations

Figure Number	Project[1]	Impacts																	
		Aesthetics	Air Quality	Biology	Cultural Resources	Energy	Geology & Soils	GHG Emissions	Hazards	Hydrology & Water Quality	Land Use & Planning	Noise	Population & Housing	Public Services	Parks & Recreation	Trans-portation	Tribal Cultural Resources	Utilities	Wildfire
1	Hollywood Center EIR (1,005 MF DUs on developed site)	LTS	LTSM	None	**SU**	None	LTSM	LTS	LTSM	LTS	LTS	**SU**	LTS	LTS	LTS	LTS	LTS	LTS	None
2	Hidden Creek Estates EIR (188 SF DUs on undeveloped site)	LTSM	LTS	LTSM	LTSM	LTSM	LTS	LTS	LTS	LTSM	LTS	LTSM	LTS	LTSM	N/A	LTSM	N/A	LTSM	N/A
3	Hollywood and Wilcox EIR (260 MF DUs on developed site)	None	LTS	None	LTSM	LTS	LTSM	LTS	None	None	LTS	**SU**	None	LTS	None	LTS	LTS	LTS	None
4	West Yucca EIR (210 MF DUs on developed site)	LTS	LTSM	None	LTSM	LTS	LTSM	LTS	None	LTS	LTS	**SU**	LTS	LTS	None	LTSM	LTS	LTS	None
5	1045 Olive EIR (794 MF DUs on developed site)	None	LTSM	LTSM	LTSM	LTS	LTSM	LTS	LTSM	LTS	None	**SU**	LTS	LTS	LTS	LTSM	LTS	LTS	None
6	Sapphire Project EIR (369 MF DUs on developed site)	LTS	LTS	None	**SU**	None	LTSM	LTS	LTSM	None	LTSM	**SU**	LTS	LTSM	N/A	LTSM	N/A	LTS	N/A
7	James Street MND (4 SF DUs on developed site)	LTS	LTS	LTSM	LTS	LTS	LTS	LTS	LTS	LTS	None	LTS	LTS	LTS	LTS	LTSM	LTS	LTS	None
8	668 S. Alameda St EIR (475 MF DUs on developed site)	LTS	LTS	None	LTSM	LTS	LTS	LTS	LTSM	LTS	LTS	LTSM	LTS	LTSM	N/A	LTSM	None	LTS	N/A
9	Sunset and Gordon Mixed Use EIR (311 MF DUs on developed site)	**SU**	LTSM	None	LTSM	N/A	LTSM	N/A	LTSM	N/A	**SU**	**SU**	LTS	LTSM	N/A	LTSM	N/A	LTSM	N/A
10	The ICON at Panorama EIR (422 MF DUs on developed site)	None	**SU**	None	None	LTS	LTS	LTS	LTS	LTS	LTS	LTSM	LTS	LTS	N/A	**SU**	N/A	LTS	N/A
11	6901 Santa Monica Blvd Mixed-Use EIR (231 MF DUs on developed site)	LTS	LTS	LTSM	LTSM	None	LTS	LTS	LTSM	LTS	None	LTSM	LTS	LTS	N/A	LTS	LTSM	LTS	N/A
12	222 W 2nd Street EIR (107 MF DUs on developed site)	None	LTS	None	LTSM	LTS	None	LTS	LTSM	None	LTS	**SU**	LTS	LTS	None	**SU**	LTS	LTS	None
13	College Station EIR (725 MF DUs on undeveloped site)	LTS	LTS	None	LTS	None	LTS	LTS	LTS	None	LTS	LTS	LTS	LTS	None	LTSM	LTS	LTS	None

[1] Agriculture and Forestry: This issue area was removed after considering all 54 projects in the table stated development under the projects would result in "No Impact."
Mineral Resources: This issue area was removed after considering the majority of projects stated that development under the projects would result in "No Impact." With the exception of the two projects: Lankershim Blvd. SCEA and Olympic and Hill SCEA identified LTS impacts citing that areas of the project site are located in a Mineral Resource Zone-2 which may contain deposits (sand and gravel) that are of significance to the State. However, neither of these projects are located within a mineral extraction operation or would involve mineral operations.

Figure Number	Project[1]	Impacts																	
		Aesthetics	Air Quality	Biology	Cultural Resources	Energy	Geology & Soils	GHG Emissions	Hazards	Hydrology & Water Quality	Land Use & Planning	Noise	Population & Housing	Public Services	Parks & Recreation	Trans-portation	Tribal Cultural Resources	Utilities	Wildfire
14	The Fig Project EIR (408 MF DUs on developed site)	**SU**	LTS	None	**SU**	LTS	LTS	LTS	LTS	None	LTS	**SU**	None	LTS	None	**SU**	LTS	LTS	None
15	1209 6th Avenue EIR (2 SF DUs on developed site)	LTS	LTS	LTS	**SU**	N/A	LTS	LTS	LTS	LTS	LTS	LTS	LTS	LTS	LTS	LTS	N/A	LTS	N/A
16	713 E 5th Street EIR (51 MF DUs on developed site)	None	LTS	None	**SU**	LTS	None	None	None	None	LTS	**SU**	None	None	None	None	LTS	None	None
17	Times Mirror Square EIR (1,127 MF DUs on developed site)	LTS	**SU**	None	**SU**	LTS	LTS	LTS	LTS	LTS	LTS	**SU**	LTS	LTS	None	**SU**	LTS	LTS	None
18	Crossroads Hollywood EIR (950 MF DUs on developed site)	LTS	**SU**	None	**SU**	N/A	LTSM	LTS	LTS	LTSM	LTS	**SU**	LTS	LTS	N/A	**SU**	N/A	LTS	N/A
19	Fig & 8th EIR (438 MF DUs on undeveloped site)	LTS	**SU**	None	LTSM	LTS	None	LTS	None	None	LTS	**SU**	None	LTS	None	**SU**	LTS	LTS	None
20	Modera Argyle EIR (276 MF DUs on developed site)	None	LTS	None	LTSM	LTS	None	LTS	None	None	LTS	**SU**	None	LTS	None	LTS	LTS	LTS	None
21	Arts District Center EIR (129 MF DUs on developed site)	LTS	LTS	None	LTS	LTS	LTS	LTS	LTS	None	LTS	**SU**	LTS	LTS	None	**SU**	None	LTS	None
22	Bay Street Mixed-Use EIR (110 MF DUs on developed site)	None	LTS	None	LTSM	LTS	LTS	LTS	LTS	LTS	LTS	LTSM	LTS	LTS	None	**SU**	LTS	LTS	None
23	5th and Hill EIR (31-160 MF DUs on developed site)	LTS	LTS	None	LTSM	LTS	LTS	LTS	LTSM	LTS	LTS	**SU**	LTS	LTS	None	None	LTS	LTS	None
24	Edinburgh Avenue SLS (8 SF DUs on developed site)	None	LTS	LTSM	**SU**	LTS	None	None	None	None	None	LTSM	LTS	None	None	LTS	LTSM	None	None
25	1375 St. Andrews EIR (185 MF DUs on developed site)	None	LTS	LTS	LTSM	LTS	None	LTS	LTS	None	LTS	**SU**	LTS	LTS	None	LTS	LTS	LTS	None
26	Santa Monica & Barrington Mixed Use EIR (180 MF DUs on developed site)	LTS	LTSM	LTS	LTS	LTS	LTS	LTS	LTS	LTS	LTS	LTSM	LTS	LTS	LTS	LTSM	N/A	LTS	N/A
27	6200 W Sunset Blvd EIR (270 MF DUs on developed site)	LTS	LTS	None	LTSM	LTS	LTS	LTS	LTSM	None	LTS	**SU**	None	LTS	None	LTS	LTS	LTS	None
28	SoCal Flower Market Project EIR (323 MF DUs on developed site)	LTS	LTSM	LTS	None	None	LTSM	None	None	LTS	None	LTSM	None	None	None	None	LTSM	LTS	None

Figure Number	Project[1]	Impacts																	
		Aesthetics	Air Quality	Biology	Cultural Resources	Energy	Geology & Soils	GHG Emissions	Hazards	Hydrology & Water Quality	Land Use & Planning	Noise	Population & Housing	Public Services	Parks & Recreation	Trans-portation	Tribal Cultural Resources	Utilities	Wildfire
29	1639-41 S Abbot Kinney Blvd MND (4 MF, 1 SF DUs on developed site)	LTS	LTS	None	LTSM	LTS	LTS	LTS	LTS	LTS	None	LTS	None	None	None	LTS	LTS	LTS	None
30	5808 N Etiwanda MND (9 SF DUs on undeveloped site)	LTS	LTS	None	LTS	LTS	LTS	LTS	LTS	LTS	LTSM	LTS	LTS	LTS	LTS	LTS	LTS	LTS	None
31	1001 Olympic (Olympia) Mixed Use EIR (488-879 MF DUs on developed site)	LTS	**SU**	LTS	LTSM	LTS	LTS	LTS	LTSM	LTS	LTS	**SU**	LTS	LTS	None	**SU**	LTS	LTS	None
32	11810 W Runnymede St Residential MND (6 SF DUs on developed site)	None	LTS	None	LTS	LTS	LTS	LTS	LTS	LTS	LTS	LTS	LTS	LTS	LTS	LTS	LTSM	LTS	None
33	11070 N Borden Ave Residential MND (9 SF DUs on undeveloped site)	None	LTS	None	LTS	LTS	LTS	LTS	LTS	LTS	LTS	LTS	LTS	LTS	LTS	LTS	LTSM	LTS	LTS
34	520 Mateo EIR (600 MF DUs on developed site)	LTS	LTSM	None	LTSM	N/A	LTSM	LTS	LTSM	LTS	LTS	LTSM	LTS	LTSM	N/A	**SU**	N/A	LTS	N/A
35	1717-19 Winona Blvd MND (15 MF DUs on developed site)	LTS	LTS	None	LTS	LTS	LTS	LTS	LTS	LTS	LTS	LTS	LTS	LTS	LTS	LTS	LTS	LTS	None
36	2730 Onyx Dr. (32 Small Lot Homes) MND (32 SF DUs on undeveloped site)	LTS	LTS	LTSM	LTS	LTS	LTS	LTS	LTSM	LTS	LTS	LTS	LTS	LTSM	LTS	LTSM	LTSM	LTS	LTSM
37	8548 N Glenoaks Blvd MND (54 MF DUs on undeveloped site)	LTS	LTS	None	LTS	LTS	LTS	LTS	LTS	LTS	None	LTSM	LTS	LTS	LTS	LTSM	LTS	LTS	LTS
38	7940 Lankershim Blvd. SCEA (432 MF DUs on developed site)	LTS	LTS	LTS	LTS	LTS	LTS	LTS	LTS	LTS	LTS	LTSM	LTS	LTS	LTS	LTS	LTS	LTS	None
39	350 S Figueroa SCEA (570 MF DUs on developed site)	LTS	LTS	LTSM	LTS	LTS	LTS	LTS	LTS	LTS	LTS	LTSM	LTS	LTS	None	LTS	LTS	LTS	None
40	ENV-2016-4617-MND (36 MF DUs on developed site)	LTS	LTS	LTS	LTS	LTS	LTS	LTS	LTS	LTS	LTS	LTSM	LTS	LTS	LTS	LTSM	LTS	LTS	None
41	Enlightenment Plaza SCEA (454 MF DUs on developed site)	LTS	LTS	LTS	LTS	LTS	LTS	LTS	LTS	LTS	LTS	LTSM	LTS	LTS	LTS	LTS	LTS	LTS	None

Figure Number	Project[1]	Impacts																	
		Aesthetics	Air Quality	Biology	Cultural Resources	Energy	Geology & Soils	GHG Emissions	Hazards	Hydrology & Water Quality	Land Use & Planning	Noise	Population & Housing	Public Services	Parks & Recreation	Trans-portation	Tribal Cultural Resources	Utilities	Wildfire
42	Los Lirios Mixed-Use SCEA (63 MF DUs on developed site)	LTS	LTS	LTS	LTS	LTS	LTS	LTS	LTS	LTS	LTS	LTS	LTS	LTS	LTS	LTS	LTSM	LTS	None
43	3440 Wilshire MND (640 MF DUs on developed site)	None	LTS	None	LTS	LTS	LTS	LTS	LTS	LTS	LTS	LTS	LTS	LTS	LTS	LTSM	LTS	LTS	None
44	York Residence MND (1 SF DU on developed site)	LTS	LTS	LTSM	LTSM	LTS	LTSM	LTS	LTS	LTS	LTS	LTS	None	LTS	LTS	LTS	None	LTS	LTS
45	340 S Hill St. Equity Residential Mixed-Use SCEA (428 MF DUs on developed site)	None	LTSM	LTS	LTS	LTS	LTS	LTS	LTSM	LTS	LTS	LTSM	LTS	LTSM	LTS	LTSM	LTS	LTS	None
46	Thatcher Yard SCEA (98 MF DUs on developed site)	LTS	LTS	LTS	LTS	LTS	LTS	LTS	LTSM	LTS	LTS	LTS	LTS	LTS	LTS	LTS	LTSM	LTS	LTS
47	3600 Wilshire SCEA (760 MF DUs on developed site)	LTS	LTSM	LTS	LTS	LTS	LTS	LTS	LTS	LTS	LTSM	LTSM	LTS	LTS	LTS	LTSM	LTS	LTS	None
48	Montecito II Senior Housing SCEA (68 MF DUs on developed site)	LTS	LTS	LTS	LTSM	N/A	LTS	LTS	LTS	LTS	LTS	LTSM	LTS	LTS	LTS	LTSM	N/A	LTS	N/A
49	Weingart Projects SCEA (685 MF DUs on developed site)	LTS	LTS	LTS	LTSM	N/A	LTS	LTS	LTSM	LTS	LTSM	LTSM	LTS	LTSM	LTS	LTSM	LTS	LTS	N/A
50	Olympic and Hill SCEA (700 MF DUs on developed site)	LTS	LTS	LTSM	LTS	LTS	LTS	LTS	LTSM	LTS	LTS	LTSM	LTS	LTSM	LTS	LTSM	LTSM	LTS	None
51	Soul Project SCEA (256 MF DUs on developed site)	LTS	LTS	LTSM	LTSM	LTS	LTSM	LTS	LTSM	LTSM	LTS	LTSM	LTS	LTSM	LTS	LTSM	LTS	LTS	None
52	8548, 8552, and 8554 N. Glenoaks Boulevard Project (68 MF DUs on undeveloped site)	LTS	LTS	LTS	LTS	LTS	LTS	LTS	LTS	LTS	LTS	LTSM	LTS	LTS	LTS	LTSM	LTS	LTS	LTS
53	Echo Park SCEA (176 MF DUs on developed site)	LTS	LTS	LTS	LTS	LTS	LTS	LTS	LTS	LTS	LTS	LTSM	LTS	LTS	LTS	LTS	LTS	LTS	LTS
54	2800 Casitas Avenue Project EIR (419 MF DUs on developed site)	LTS	LTS	LTS	LTS	LTS	LTS	LTS	LTS	LTS	LTS	**SU**	LTS	LTS	N/A	LTS	LTS	LTS	N/A

FORMAT OF SECTIONS

The analysis of each environmental impact category is organized to include the following subsections:

Existing Setting

This subsection includes a description of existing conditions that precede implementation of the proposed project. CEQA Guidelines Section 15125(a) requires that an EIR include a description of the physical environmental conditions in the vicinity of a proposed project as they exist at the time the Notice of Preparation (NOP) is published. The NOP for this EIR was published on January 13, 2021. Thus, unless otherwise expressly indicated, the Draft EIR uses January 2021 as the baseline for analysis of impacts from the proposed project. [2]

Regulatory Framework

This subsection includes an identification of applicable federal, State, and local laws, regulations, policies, plans and in some instances, regulating agencies, that regulate, plan or have jurisdiction over the environmental area of concern.

Thresholds of Significance

This subsection identifies the criteria by which the components of the proposed project are measured to determine if the project would cause a substantial or potentially substantial adverse change in the existing environmental (baseline) conditions.

This EIR relies upon CEQA Guidelines Appendix G thresholds as the threshold of significance unless another is specifically identified in the EIR. The City may rely on thresholds of significance adopted by regulatory agencies, such as SCAQMD, or any others deemed appropriate by the City, which are supported by substantial evidence.

The court in *California Building Industry Association v. Bay Area Air Quality Management District* (CBIA v. BAAQMD), confirmed the general principle that CEQA only requires analysis of a project's effect on the environment and not the reverse (i.e., the impact of existing environmental conditions on a project), except in limited circumstances including instances where the project might worsen or exacerbate existing environmental hazards. To the extent that any thresholds used in this EIR suggest analyzing impacts from the existing environment on the proposed project, the analysis is limited to whether the project would exacerbate existing conditions, consistent with CBIA v. BAAQMD, unless otherwise expressly indicated.

Discussion in both thresholds and methodology subsections found in the sections associated with each individual impact area provide further explanation of which thresholds are used. As to each environmental topic, the City has selected the thresholds that ensure as comprehensive an analysis of the Proposed

[2] For specific environmental issue areas that rely on technical data for modeling purposes, such as the City's transportation model discussed in Section 4.14, *Transportation*, certain analyses rely on previous baseline years for input data. Due to the COVID-19 pandemic, certain instances require utilizing previous years data for accurate planning purposes. Individual discussions of these circumstances, where applicable, are discussed in the existing setting and methodology in their respective environmental issue sections (Section 4.1 through 4.17.

Project's potential environmental impacts as possible, given the constraints of attempting to analyze a policy document that will be implemented over the course of an eight-year period.

Finally, all impact questions, except as indicated below, are interpreted to take into account the following mandatory findings of significance from CEQA Guidelines Section 15065(a):

(1) *The project has the potential to substantially degrade the quality of the environment; substantially reduce the habitat of a fish or wildlife species; cause a fish or wildlife population to drop below self-sustaining levels; threaten to eliminate a plant or animal community; substantially reduce the number or restrict the range of an endangered, rare or threatened species; or eliminate important examples of the major periods of California history or prehistory. [Considered in Sections 4.3, Biological Resources, and 4.4, Cultural Resources]*

(2) *The project has the potential to achieve short-term environmental goals to the disadvantage of long-term environmental goals. [Considered in impact analysis in Sections 4.1 through 4.17]*

(3) *The project has possible environmental effects that are individually limited but cumulatively considerable. "Cumulatively considerable" means that the incremental effects of an individual project are significant when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects. [Considered in the cumulative analysis in each impact Sections 4.1 through 4.17]*

(4) *The environmental effects of a project will cause substantial adverse effects on human beings, either directly or indirectly. [Considered in all impact analysis Sections 4.1 through 4.17]*

Methodology

This subsection summarizes the methods, procedures and techniques used to estimate the impacts of the proposed project.

As described in the "Thresholds of Significance" discussion above, the methodology subsection may also further clarify which thresholds (CEQA Appendix G or the City Thresholds Guide, etc.) are used when describing the methods, procedures and techniques used to estimate the project's impacts. Generally, a methodology discussion notes whether the environmental impacts being analyzed identify potential impacts that are localized (e.g., population, housing, employment; land use) or would generally affect the entire City, or region (e.g., air quality or greenhouse gas emissions). Consequently, this subsection may describe the geographic extent to which the project could potentially affect for each environmental topic area.

Impact Analysis

This subsection analyzes the effects of the Proposed Project against baseline conditions to determine whether the Proposed Project would result in significant impacts to the environment. As discussed above, the baseline, unless expressly provided otherwise in this EIR, is the existing conditions at the time the NOP was published.

For each significant impact or potentially significant impact identified, this subsection also recommends appropriate and reasonable mitigation measures to avoid or minimize impacts to the extent feasible. In addition, this subsection includes a discussion of whether a significant and unavoidable impact would be reduced to a less-than-significant level after mitigation or would remain significant and unavoidable.

The analysis of the Housing Element Update and Safety Element Update is quantified using growth projections for many of the impact areas. As discussed in Chapter 2, *Project Description*, the Proposed Project is the build out of the RHNA housing units in the next eight years. As SCAG has identified however, the RHNA is not a growth inducing plan, it is intended to identify housing needs based on the RTP/SCS growth projections and existing need. Therefore, except as discussed in the Growth Inducing Impact discussion in the Chapter 5, *Other CEQA*, anticipated population growth is based on the population and employment projections prepared by SCAG, in the 2020-2045 RTP/SCS, interpolated for the Housing Element's eight year planning horizon (2021-2029).

The following terms are used to describe the level of significance of impacts identified in the analysis:

No Impact

No Impact applies where an environmental issue is evaluated, and it is determined that the project would have no effect or impact in that category. No Impact determinations are supported by information showing that the impact does not apply to the proposed project.

Less-Than-Significant Impact

Less-Than-Significant Impact applies where the project would create only less than significant impacts that do not exceed the defined threshold of significance. CEQA does not require mitigation for Less-Than-Significant Impacts.

Less-Than-Significant with Mitigation Incorporated Impact

Less-Than-Significant with Mitigation Incorporated Impact applies to an impact that exceeds the defined threshold of significance, but for which mitigation is identified to reduce the impact to a less-than-significant level.

Significant and Unavoidable Impact

Significant and Unavoidable Impact applies to an impact that exceeds the defined threshold of significance and cannot be eliminated or reduced to a less-than-significant level through implementation of feasible mitigation measures.

The Impact Analysis discussion includes the following components:

a. **Discussion**

   Provides discussion presenting evidence that substantiates the impact conclusion.

b. **Mitigation Measures**

   When an impact is initially identified as significant or potentially significant, feasible mitigation measures that would avoid or reduce the magnitude of impact are identified. If the impact conclusion is no impact or less than significant after the impact analysis discussion, this part is not included or is identified as not applicable. If no feasible mitigation measure is identified that will be stated in this subsection.

c. **Significance of Impacts/Summary of Impacts After Mitigation**

This subsection identifies the level of significance after mitigation. If the project would have a potentially significant impact before mitigation, a discussion will be provided to determine whether the potentially significant impact would be reduced to a less-than-significant level after mitigation or would be significant and unavoidable.

Cumulative Impacts

This subsection analyzes cumulative impacts associated with the proposed project. Cumulative impacts are the changes in the environment that result from the incremental impact of development of the project and other projects with related impacts. CEQA Guidelines Section 15130 allows for two approaches to study cumulative impacts: using a list of past, current and probable future projects or relying on a summary of projections (growth forecasts) from adopted local, regional or statewide plans. Cumulative impact analysis allows the EIR to provide a reasonable forecast of future environmental conditions and can more accurately gauge the effects of a series of projects.

Because the proposed project is the Housing Element Update and Safety Element Update encompassing the entire City limits over an eight-year period, the cumulative projects would be the housing projects that have already been approved but have not received their certificate of occupancies, and all other types of development (non-residential) that are in the pipeline or have been approved but are not occupied and/or will be approved and developed by the plan horizon (2029). The cumulative impacts analysis in this EIR relies on the regional growth projections method, utilizing data available from SCAG's 2020 RTP/SCS. In general, the cumulative environmental analysis in this EIR is based on horizon conditions of the City General Plan, however, due to the eight-year update cycle of the Housing Element, 2029 conditions have been identified and included in the discussion. Population, household, and employment projections in the City are shown in Table 4-3. Per the growth forecasts in SCAG's 2020 RTP/SCS, as shown in Table 4-3, the population of the City is expected to increase to 4,309,231 persons by 2029. In addition, per SCAG's forecasts, the number of households in the City is expected to increase to 1,557,966 by 2029.

Table 4-3 Population, Households and Employment Projections of Cumulative Impact Analysis Area, Years 2016-2029

	Population		Households		Jobs	
	2016	2029[1]	2016	2029[1]	2016	2029[1]
City of Los Angeles	3,933,800	4,309,231	1,367,000	1,557,966	1,848,300	1,977,221
County of Los Angeles	**10,110,000**	**10,811,103**	**3,319,000**	**2,677,618**	**4,743,000**	**5,029,442**

[1] Demographics and growth forecast data prepared by SCAG includes a baseline year of 2016 and a horizon year of 2045. For illustrative purposes, Year 2029 is calculated using a linear interpolation of an annual average increase between years 2016-2045.
Source: SCAG 2020 Demographics and Growth Forecast Technical Report

REFERENCES

This subsection identifies the sources and technical studies utilized in the preparation of this EIR. These sources and studies are referenced throughout the document where appropriate.

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4.1 AESTHETICS

This section analyzes the potential for aesthetic and visual impacts associated with the implementation of the Housing Element Update. The Initial Study found that the project would result in less than significant impacts associated with scenic vistas, scenic highways, and the creation of new sources of light and glare. Impacts from the Safety Element were found to be less than significant in the Initial Study (See Appendix A). However, based on public comments received during the scoping period, potential impacts associated with scenic vistas from the Housing Element Update have been included in the impact analysis below. The analysis also focuses on impacts pertaining to existing visual character and regulations to protect visual quality applicable to housing development accommodated by the Housing Element Update.

4.1.1 ENVIRONMENTAL SETTING

Existing Visual Conditions

The Housing Element Update would apply to the entire geographic area located within the boundaries of the City of Los Angeles, which encompasses 467 square miles. Los Angeles is a coastal city, generally surrounded by the San Gabriel Mountains to the north; the Verdugo Mountains, San Rafael Hills and San Gabriel Valley to the east; the Santa Susana Mountains, Santa Monica Mountains and Pacific Ocean to the west; and the Pacific Ocean to the south. The Santa Monica Mountains and Los Angeles River bisect the City, separating the San Fernando Valley in the north from the Los Angeles metropolitan basin in the south. Generally, flat areas of the city are highly urbanized, with the mountains bisecting and surrounding the city, which generally consist of a mix of lower density residential development and open space. The San Fernando Valley and Central Los Angeles to the southern tip of the City are highly urbanized.

The City consists of a variety of residential, civic, institutional, commercial, industrial, and recreational/open space uses. A grid system of east-west and north-south roadways, including arterials, collectors, and local streets, provides vehicular access throughout much of the City. The major freeways and highways providing regional access are Interstate 5 (I-5), Interstate 405 (I-405), Interstate 10 (I-10), Interstate 110 (I-110), Interstate and State Route 210 and 710, State Route 2 (SR-2) and 134 (SR-134), and U.S. Highway 101 (U.S. 101). The Port of Los Angeles, located at the southern end of the City in the communities of San Pedro and Wilmington, occupies 7,500 acres of land and water along 43 miles of waterfront and adjoins the separate Port of Long Beach.

Scenic Views and Vistas

The term views generally refers to visual access to, or the visibility of, a particular natural or man-made visual resource (e.g., a prominent geologic feature or historic resource) from a given vantage point or

corridor. Scenic views focus on a particular object, scene, setting, or feature of visual interest. Panoramic views, or vistas, provide visual access to a large geographic area, for which the field of view can be wide and extend into the distance. Panoramic views are usually associated with vantage points looking out over urban or natural areas that provide a geographic orientation and view not commonly available. Examples of panoramic views might include an urban skyline, a valley, a mountain range, the ocean, or other water bodies. The City's General Plan Conservation Element defines scenic views or vistas as the panoramic public views of natural features, including views of the ocean, striking or unusual natural terrain, or unique urban or historic features. Public access to these views is typically from park lands, publicly-owned sites, and public rights-of-way.

Scenic views and vistas are located throughout the City. Some prominent scenic views and vistas in the City include Pacific Palisades, Pacoima Wash, San Gabriel Mountains, Santa Susana Mountains, San Pedro's coastal bluffs, Griffith Park, and Elysian Park. Scenic protection provisions are contained in the community plans for the City. Some protections include height limits and building setback requirements. Some scenic highways, including the Mulholland Drive Scenic Parkway, are regulated by specific plan ordinances that contain design provisions intended to protect natural ridge tops, neighborhood visual ambience, public views and other features.

Existing Development

Local aesthetics, typically found on a neighborhood level, contribute to the urban visual character of the City's planning area. Development densities and types, distinctive neighborhoods and commercial districts, recognizable architectural elements, prominent public institutions/landmarks, and other elements all contribute to the City's aesthetic quality.

According to the City's General Plan Framework FEIR, the City has identified three primary types of housing that are predominantly found throughout the City. These types of housing include single-family housing, multi-family housing, and mixed-use (mixed density) residential (City of Los Angeles 1995). Visual examples illustrating these basic classification types of housing are shown in Figure 4.1-1a through Figure 4.1-1ac. Commercial and industrial development also occurs throughout the City.

Single-Family Residential

Single-family dwelling units are distributed throughout Los Angeles. In general, single-family units occur between arterial roadways, within the grid pattern of streets adjacent to commercial or multi-family residential uses. Single-family residential projects may range in size, design, and scale from smaller or larger single-family homes to small-lot subdivisions and multi-property single-family subdivisions (see Figures 4.1-1a through 4.1-1k). Single-family units can be visually described, generally, as rectangular

building masses ranging from one to three stories in height (about 10 to 30 feet). In the hillside areas, single-family residences are primarily found at the bottom of canyons that follow the natural topography of the hillsides.

Multi-Family Residential

Multi-family residential projects may range in size from small apartment buildings with 2-10 units to larger apartment buildings and high-rise structures with hundreds of units. Multi-family residential projects can take different forms; for example, residential units can be all in one building or spread out in bungalow court style apartments (see Figure 4.1-1l through Figure 4.1-1u). Multi-family housing is distributed throughout the City with a large concentration found within the City's oldest neighborhoods. Two-story multi-family housing buildings are found in most Community Plan Areas, and three- to four-story multi-family housing buildings are scattered throughout the City. Larger multi-family developments exist primarily in the denser Downtown core of the City as well as in other areas designated as Regional Centers (such as Hollywood, Wilshire-Koreatown, North Hollywood and Warner Center), ranging generally from five to eight stories in height.

Mixed-Use Residential

Mixed-use residential development primarily consists of multi-family housing, but is distinct from multi-family residential housing in that it contains one or more uses in addition to the residential use, such as retail. There are considerable areas of mixed-use residential development throughout the City, particularly near transit stations and along transit corridors in areas such as Hollywood, Little Tokyo/Arts District, North Hollywood, Silverlake/Echo Park, and Boyle Heights. Mixed-use residential in the City typically range from two to six or more stories (20 to 60 or more feet in height) with rectangular building masses (see Figure 4.1-1v through Figure 4.1-1ac). The non-residential uses can typically be found on the ground level of the buildings, with residential units on the second story and higher. Some mixed-use residential development also incorporates nonresidential uses such as hotel use on the second story and higher.

Other Types of Residential Development

Other types of residential development generally fall within a residential building type described above. Multi-family and mixed use developments may consist of single-resident occupancy or affordable housing, which may be for families, seniors, residents with special needs. Residential developments may also be used as permanent supportive housing, which is defined as housing that is combined with supportive services (hereafter referred to as "supportive housing").

Accessory dwelling units (ADUs) are enclosed spaces intended for separate, independent living quarters and are typically characterized by units that are either attached, detached or contained within a primary

residence, which is typically single-family dwelling but can include multi-family dwellings. Other types include Junior ADUs, which are units that are no more than 500 square feet in size and contained entirely within a single-family residence; ADUs converted from existing floor area; multiple ADUs on lots with existing multi-family dwellings; and Movable Tiny Houses (MTH), which are small (less than 430 square feet) ADUs on wheels (similar to a park trailer).

The City adopted the Small Lot Subdivision Ordinance in 2005. Small Lot Subdivisions are single-family infill housing, including attached townhouses, in commercial and multi-family neighborhoods. A subdivision for the purposes of small lots enables the construction of new small lot homes and provides opportunities for the preservation of existing residential dwelling units located on a single lot to be rehabilitated as for-sale dwellings on individual small lots. One example is the Morton Village small-lot subdivision, which consists of 15 newly constructed units at the rear of the property and the remodel of 3 existing bungalows that face the street.

Conversion/rehabilitation housing consists of existing non-residential and mixed-use structures that are converted to housing units, such as live/work units that were formerly used for commercial or industrial space.

Historical Resources

The City of Los Angeles has a rich history. As of May 2021, there are 1,223 historic-cultural monuments in the City of Los Angeles, including residences, government buildings, places of worship, natural elements, and parks. The City has also designated 35 Historic Preservation Overlay Zones (see Figure 4.4-1 through Figure 4.4-7 in Section 4.4, *Cultural Resources*). See Section 4.4, *Cultural Resources,* for additional background information and impacts associated with historic resources.

Non-Residential Development

Commercial uses are generally located along major arterial corridors and centers throughout the City that are typically characterized by low-rise buildings. High-rise commercial development, exceeding 13 stories, are located in particular areas throughout the City, including but not limited to Central City (Downtown), Westlake, Century City, Wilshire Boulevard, and Ventura Boulevard in Sherman Oaks.

Industrial development occurs in four main areas of the City. These "clusters" are located within the Central City (south, east, and northeast), Sun Valley, Port of Los Angeles, and the Los Angeles International Airport. Furthermore, smaller areas with industrial development within the City include the Warner Center, Harbor Gateway, Studio City, and Sylmar. Generally, industrial development occurs throughout the City and is typically low-rise. Industrial development in the City generally consists of low-rise buildings.

Figure 4.1-1a View of Single-Family Residences in Historic District of Angelino Heights

Figure 4.1-1b View of a Hillside Single-Family Residence in Highland Park

Figure 4.1-1c View of Hillside Single-Family Residential Development in Highland Park

Figure 4.1-1d View of a Single-Family Residence in Carthay Square

Figure 4.1-1e View of a Single-Family Residences in South Park

Figure 4.1-1f View of Single-Family Residences in Venice

Figure 4.1-1g View of a Single-Family Residences in Wilmington

Figure 4.1-1h View of a Single-Family Residences in San Pedro

Figure 4.1-1i View of a Single-Family Residence in North Hollywood

Figure 4.1-1j View of a Single-Family Residence and ADU in Highland Park

Figure 4.1-1k View of a Single-Family Residence and ADU in North Hollywood

Figure 4.1-1l View of a Multi-Family Residences in Wilmington

Figure 4.1-1m View of a Multi-Family Residences in San Pedro

Figure 4.1-1n View of Multi-Family Residences in Lincoln Heights

Figure 4.1-1o View of Multi-Family Residential Building in North Hollywood

Figure 4.1-1p View of a Small Lot Subdivision in North Hollywood

Figure 4.1-1q View of Multi-Family Residential Building in Pico Union

Figure 4.1-1r View of Multi-Family Bungalows in Venice

Figure 4.1-1s View of Multi-Family Residential Buildings in Chinatown

Figure 4.1-1t View of Bryson Apartments in MacArthur Park

Figure 4.1-1u View of Multi-Family Residence in Carthay Square

Figure 4.1-1v View of Mixed Use Development in the Arts District

Figure 4.1-1w View of Mixed Use Development in the Arts District

Figure 4.1-1x View of Live-Work Lofts in the Arts District

Figure 4.1-1y View of Mixed Use Development in North Hollywood

Figure 4.1-1z View of Mixed Use Development in Little Tokyo

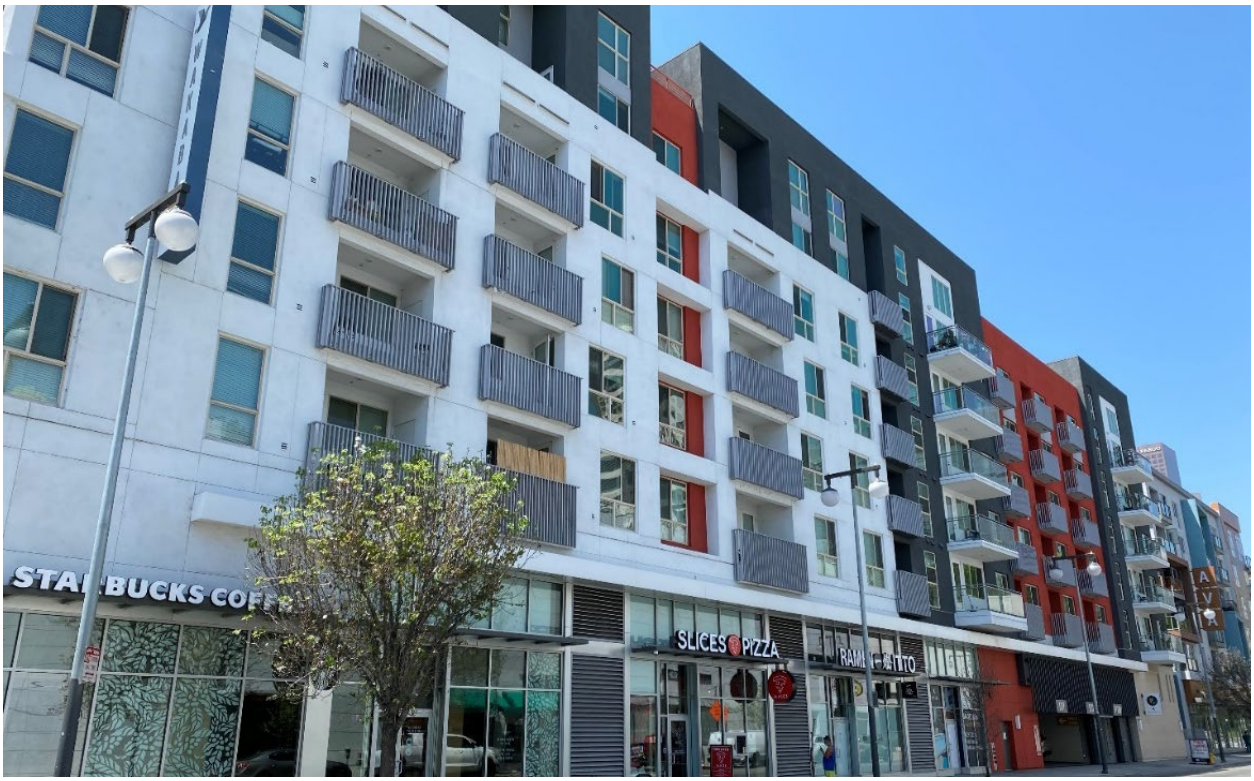


Figure 4.1-1aa View of Mixed Use Development in Hollywood

Figure 4.1-1ab View of Mixed Use Development in Hollywood

Figure 4.1-1ac View of Mixed Use Development in Panorama City

4.1.2 REGULATORY FRAMEWORK

State

Senate Bill 743 (SB 743) (Environmental Quality)

On September 2013, Governor Brown signed into law SB 743, which instituted changes to the California Environmental Quality Act (CEQA) when evaluating environmental impacts of projects in areas served by transit. While the focus of SB 743 is to address how transportation impacts are evaluated, it also limits the extent to which aesthetic impacts are evaluated under CEQA. SB 743 (Public Resources Code [PRC] Section 21099 (d)(1)) exempts development projects located in Transit Priority Areas (TPAs), from review of aesthetic impacts under CEQA. Specifically, this bill states that aesthetic impacts of a residential, mixed-use residential, or employment center project on an infill site within a TPA shall not be considered significant impacts on the environment. Therefore, aesthetic impacts within a TPA are considered less than significant in environmental analyses. A TPA is defined as an area within one-half mile of a major transit stop that is existing or planned.

California Coastal Act

The California Coastal Act of 1976 provides planning and management policies for coastal resources, including providing guidelines for land development within the coastal zone. Specifically, Public Resources Code Division 20, Chapter 3, Article 6, Section 30251 provides scenic and visual quality policies for the coastal zone. It states, "Permitted development shall be sited and designed to protect views to and along the ocean and scenic coastal areas, to minimize the alteration of natural land forms, to be visually compatible with the character of surrounding areas, and, where feasible, to restore and enhance visual quality in visually degraded areas." Additionally, projects within the coastal zone must consider the scenic and visual qualities of coastal areas and protect such qualities as a resource of public importance.

Local

City of Los Angeles General Plan Framework, Conservation Element, and Mobility Plan 2035

The Framework Element planning policies regarding urban form, neighborhood design and the conservation of open space and other scenic resources, described in Framework Element Section 1.1 of Chapter 1, *Introduction and Community Profile*, are intended to improve community and neighborhood livability in the City of Los Angeles. The Framework Element's policies on Open Space and Conservation seek to conserve resources and use open space to enhance community and neighborhood character in the City.

The Conservation Element (adopted in 2001) includes a discussion of the existing landforms and scenic vistas in the City of Los Angeles. Objectives, policies, and programs included in this element are intended to ensure the protection of natural terrain and landforms, unique site features, scenic highways, and panoramic public views as City staff and decision-makers consider future land use development and infrastructure projects.

The Mobility Plan 2035 (adopted in 2016) provides an inventory of City-designated scenic highways. Scenic highways depicted in the City have special controls for protection and enhancement of scenic resources. The Mobility Plan 2035 also includes Scenic Highway Guidelines for those designated scenic highways for which there is no adopted scenic corridor plan. (Los Angeles 2016a)

Objectives, policies, and programs included in the General Plan Framework, Conservation Element and Mobility Plan 2035 are intended to ensure the protection of natural terrain and landforms, unique site features, scenic highways, and panoramic public views as City staff and decision-makers consider future land use development and infrastructure projects. Applicable goals, objectives, and policies of these General Plan elements are shown in Table 4.1-1. See Section 4.9, *Land Use and Planning*, for a discussion of land use consistency with aesthetics goals and objectives.

Table 4.1-1 Relevant General Plan Aesthetics Goals, Objectives, and Policies

General Plan Framework	
Goal 5A	A livable City for existing and future residents and one that is attractive to future investment. A City of interconnected, diverse neighborhoods that builds on the strengths of those neighborhoods and functions at both the neighborhood and citywide scales.
Objective 5.1	Translate the Framework Element's intent with respect to citywide urban form and neighborhood design to the community and neighborhood levels through locally prepared plans that build on each neighborhood's attributes, emphasize quality of development, and provide or advocate "proactive" implementation programs.
Policy 5.1.1	Use the Community Plan Update process and related efforts to define the character of communities and neighborhoods at a finer grain than the Framework Element permits.
Policy 5.2.2	Encourage the development of centers, districts, and selected corridor/boulevard nodes such that the land uses, scale, and built form allowed and/or encouraged within these areas allow them to function as centers and support transit use, both in daytime and nighttime. Additionally, develop these areas so that they are compatible with surrounding neighborhoods, as defined generally by the following building characteristics: • Buildings in neighborhood districts generally should be low rise (one- to two-stories), compatible with adjacent housing, and incorporate the pedestrian-oriented design elements defined in Policies 5.8.1 and 3.16.1 - 3.16.3. They should also be located along sidewalks with appropriate continuous storefronts. • Buildings in community centers generally should be two to six stories in height, with the first several stories located along the sidewalk. They should also incorporate the pedestrian-oriented elements defined in policy 5.8.1. Either housing or office space may be located above the ground floor storefronts.

General Plan Framework	
	• The built form of regional centers will vary by location. In areas, such as Wilshire and Hollywood Boulevards, buildings will range from low- to mid-rise buildings, with storefronts situated along pedestrian-oriented streets. Regional centers should contain pedestrian-oriented areas and incorporate the pedestrian-oriented design elements defined in Policies 5.8.1 and 3.16.1 – 3.16.3. • Buildings located at activity nodes along mixed-use boulevards generally shall have the same characteristics as either neighborhood districts or community centers, depending on permitted land use intensities. Housing over ground floor storefronts or in place of commercial development shall be encouraged along mixed-use boulevards.
Objective 5.5	Enhance the livability of all neighborhoods by upgrading the quality of development and improving the quality of the public realm.
Policy 5.5.3	Formulate and adopt building and site design standards and guidelines to raise the quality of design citywide.
Policy 5.5.4	Determine the appropriate urban design elements at the neighborhood level, such as sidewalk width and materials, streetlights and trees, bus shelters and benches, and other street furniture.
Policy 5.5.6	Identify building and site design elements for commercial or mixed-use streets in centers that may include: the height above which buildings must step back; the location of the building base horizontal articulation; and other design elements.
Policy 5.5.7	Promote the undergrounding of utilities throughout the City's neighborhoods, districts, and centers.
Objective 5.6	Conserve and reinforce the community character of neighborhoods and commercial districts not designated as growth areas.
Policy 5.6.1	Revise community plan designations as necessary to conserve the existing urban form and community character of areas not designated as centers, districts, or mixed-use boulevards.
Objective 5.7	Provide a transition between conservation neighborhoods and their centers.
Policy 5.7.1	Establish standards for transitions in building height and for on-site landscape buffers.
Objective 5.8	Reinforce or encourage the establishment of a strong pedestrian orientation in designated neighborhood districts, community centers, and pedestrian-oriented subareas within regional centers, so that these districts and centers can serve as a focus of activity for the surrounding community and a focus for investment in the community.
Policy 5.8.1	Buildings in pedestrian-oriented districts and centers should have the following general characteristics: • An exterior building wall high enough to define the street, create a sense of enclosure, and typically located along the sidewalk; • A building wall more-or-less continuous along the street frontage; • Ground floor building frontage designed to accommodate commercial uses, community facilities, or display cases; • Shops with entrances directly accessible from the sidewalk and located at frequent intervals; • Well-lit exteriors fronting on the sidewalk that provide safety and comfort commensurate with the intended nighttime use, when appropriate; • Ground floor building walls devoted to display windows or display cases; • Parking located behind the commercial frontage and screened from view and driveways located on side streets where feasible;

General Plan Framework	
	• Inclusion of bicycle parking areas and facilities to reduce the need for vehicular use; and • The area within 15 feet of the sidewalk may be an arcade that is substantially open to the sidewalk to accommodate outdoor dining or other activities.
Policy 5.8.2	The primary commercial streets within pedestrian-oriented districts and centers should have the following characteristics: • Sidewalks: 15-17 feet wide (see illustrative street cross-sections). • Mid-block medians (between intersections): landscaped where feasible. • Shade trees, pruned above business signs, to provide a continuous canopy along the sidewalk and/or palm trees to provide visibility from a distance. • Pedestrian amenities (e.g., benches, pedestrian-scale lighting, special paving, window boxes, and planters).
Policy 5.8.4	Encourage that signage be designed to be integrated with the architectural character of the buildings and convey a visually attractive character.
Conservation Element	
Land Form & Scenic Vista Objective	Protect and reinforce natural and scenic vistas as irreplaceable resources and for the aesthetic enjoyment of present and future generations.
Land Form & Scenic Vista Policy	Continue to encourage and/or require property owners to develop their properties in a manner that will, to the greatest extent practical, retain significant existing land forms (e.g., ridge lines, bluffs, unique geologic features) and unique scenic features (historic, ocean, mountains, unique natural features) and/or make possible public view or other access to unique features or scenic views.
Mobility Plan 2035	
Objective 11	Preserve and enhance access to scenic resources and regional open space.
Policy 11.1	Designate scenic highways and scenic byways which merit special consideration for protection and enhancement of scenic resources.
Policy 11.2	Provide for protection and enhancement of views of scenic resources along or visible from designated scenic highways through implementation of guidelines set forth in this 2035 Mobility Plan.
Policy 11.3	Consider aesthetics and scenic preservation in the design and maintenance of designated scenic highways and of those scenic byways designated in Community Plans.
Policy 11.4	Establish Scenic Corridor Plans, where appropriate, which set forth corridor boundaries and development controls in harmony with each corridor's specific scenic character.
Policy 2.16	Ensure that future modifications to any scenic highway do not impact the unique identity or characteristic of that scenic highway.
Source: City of Los Angeles, The Citywide General Plan Framework: An Element of the City of Los Angeles General Plan, re-adopted 2001; City of Los Angeles, Conservation Element of the City of Los Angeles General Plan, adopted 2001; City of Los Angeles General Plan, Mobility Plan 2035: An Element of the General Plan, adopted 2015.	

In addition to the objectives and policies included in the General Plan, the City's Community Plans also have policies to protect aesthetics, including for special areas. Typical examples of such policies include, but are not limited to, the following:

- **Brentwood – Pacific Palisades Community Plan**

  Policy 1-3.2: Preserve existing views in hillside areas.

  Policy 1-4.2: Preserve architecturally or historically significant features and incorporate such features as an integral part of new development when appropriate.

  Policy 1-6.6: The scenic value of natural land forms should be preserved, enhanced and restored. Wherever feasible, development should be integrated with and be visually subordinate to natural features and terrain. Structures should be located to minimize intrusion into scenic open spaces by being clustered near other natural and manmade features such as tree masses, rock outcrops and existing structures.

- **San Pedro Community Plan**

  Policy LU1.3: Neighborhood transitions. Assure smooth transitions in scale, form, and character, by regulating the setback, stepbacks, rear elevations, and backyard landscaping of new development where neighborhoods of differing housing type and density abut one another. (P1, P2)

- **Wilshire Community Plan**

  Policy 1-3.2: Support historic preservation goals in neighborhoods of architectural merit and/or historic significance.

City of Los Angeles Planning and Zoning Code and Building Regulations

LAMC Chapter 1 contains the Planning and Zoning Code, and Chapter 9 contains Building Regulations. The purpose of the Planning and Zoning Code is to designate and regulate the location, use, height and size of buildings. The Planning and Zoning Code regulates the aesthetics and visual quality of development projects. It includes development regulations specific to each zone and also addresses parking, landscaping, landform protection, lighting, and a number of other topics that influence the aesthetics of a development project. The Planning and Zoning Code also includes design regulations that seek to affect the physical alteration of streets, intersections, alleys, pedestrian walkways, and landscaping. Specific zoning regulations are identified below under the City's regulatory compliance measures (RCMs).

City of Los Angeles Specific Plans/Overlay Zones

In addition to the RCMs listed below, reasonably foreseeable projects under the Housing Element Update would also be subject to any applicable regulations intended to protect scenic and visual resources established in adopted specific plans and overlay zones, such as the Mulholland Scenic Parkway Specific Plan (1992), San Gabriel/Verdugo Mountains Scenic Preservation Specific Plan (2004), Historic Preservation Overlay Zones (HPOZ), Community Plan Implementation Overlays, Streetscape Plans, and Community Design Overlays (CDO). For example, the Mulholland Scenic Parkways Specific Plan and San Gabriel/Verdugo Mountains Scenic Preservation Specific Plan establish specific regulations for Mulholland Drive and the San Gabriel/Verdugo Mountains related to land use, prominent ridgelines, viewsheds, vista points, lighting, signage, and building heights and massing (City of Los Angeles 1992; City of Los Angeles 2003). Overlays further implement the City's General Plan and Community Plans through neighborhood-specific policy objectives, supplementing the underlying base zoning. For example, CDOs contain design guidelines that enhance the visual identity and character of a neighborhood. They can apply to new development projects and improvements to existing properties. A list of Specific Plans and overlay zones in the City that regulate design and development standards is available on the City Planning website at: https://planning.lacity.org/plans-policies/overlays.

4.1.3 ENVIRONMENTAL IMPACTS

Thresholds of Significance

In accordance with Appendix G of the State CEQA Guidelines, the Housing Element Update would have a significant impact to aesthetic resources if either of the following occurs:

- **Threshold 4.1-1:** The housing development accommodated by the Housing Element Update would have a substantial adverse effect on a scenic vista.
- **Threshold 4.1-2:** The housing development accommodated by the Housing Element Update conflicts with applicable zoning and other regulations governing scenic quality; or any Housing Element Update, Rezoning Program or other Code or plan amendment would substantially degrade the visual character or quality of the project area.

In regard to Threshold 4.1-2, **"**urbanized area." as defined by CEQA. is an incorporated City that has a population of at least 100,000 persons. Therefore, all the City of Los Angeles is an urbanized area and the appropriate threshold of significance is would the Proposed Project "conflict with applicable zoning and other regulations governing scenic quality? To the extent that the Proposed Project includes Rezoning Programs that may change the "applicable zoning," the EIR will also consider whether those programs will, in fact, substantially degrade the visual character or quality of the project area and its surroundings.

Methodology

The impact discussion considers impacts from inside and outside the City where visual resources may be affected by the development of housing accommodated by the Housing Element.

As discussed in the regulatory setting, under SB 743, residential, mixed-use, and employment center projects in a TPA are exempt from aesthetic impacts analysis. Development that is accommodated by the Housing Element in the TPAs would be residential or mixed use and would therefore, as a matter of law, not have aesthetic impacts under CEQA Guidelines. It is reasonable to assume that the Proposed Project should not have foreseeable aesthetic impacts for these qualifying projects. Nevertheless, the relevant language of SB 743, codified at PRC Section 21099(d), does not expressly apply to projects involving adoption of a plan amendment. Therefore, this EIR conservatively considers aesthetic impacts from the implementation of the project in all areas of the City where housing can be developed or will foreseeably occur from the Rezoning Program, including TPAs.

The assessment of aesthetic impacts involves qualitative analysis that is inherently subjective in nature. Different viewers react to views and aesthetic conditions differently. This evaluation measures the housing development accommodated by the Housing Element against the existing visual environment. The Housing Element Update does not consist of specific development proposals; therefore, this analysis focuses on indirect impacts that are reasonably foreseeable under the Proposed Project and their potential aesthetic impacts with regard to the built environment, open space, density, and intensity of development.

Visual Character

The concept of visual character is not explicitly defined in the CEQA Guidelines. In this aesthetics discussion, potential visual character impacts are assessed based on industry-accepted definitions of visual character. Visual character can be defined in terms of the overall impression formed by the relationship between perceived visual elements of the built, urban environment.

Elements contributing to the impression of the character of an area include the following:

- Height and mass of proposed buildings compared to existing development;
- The compatibility between uses and activities with the built environment;
- The quality of the public realm, including roadways, sidewalks, plazas, parks, and street furniture;
- The nature and quality of landscaping that is visible to the general public; and
- The relationship between built and unbuilt space, or building "coverage."
- The presence of shade/shadows

Impacts to the visual character of an area generally relate to the removal of features with aesthetic value, the introduction of contrasting urban features into a local area, and the degree to which the elements of the development of housing accommodated by the Housing Element detracts from the visual character of an area.

Although the threshold of significance in Appendix G focuses on whether the Proposed Project conflicts with the applicable zoning in an urban environment, as the Proposed Project includes a Rezoning Program that would make changes to the applicable zoning with the Proposed Project, the analysis in this impact area will also analyze whether the Proposed Project would be expected to degrade the existing visual character of the City and its surrounding area for the Rezoning Program.

Scenic Vistas/Obstruction of Views

For the purposes of the CEQA analysis, impacts to views typically consist of the loss or obstruction of a valued public view (e.g., scenic vista, particularly a panoramic view of areas that have visual interest, or iconic structure), or changes in the character of the viewshed that detract from a valued public view, such as the elimination or obstruction of natural and/or man-made features that were formerly part of a valued viewshed. The assessment method identifies whether the content of a scenic view would be adversely affected by build out of the RHNA. Diminishment of a scenic vista would occur if the build out of the RHNA would introduce buildings or development that contrast enough with a visually interesting view or obstruct the view, so that the content and quality of the view is permanently affected. The loss of a private view would not be an impact for purposes of this analysis. The City does not protect private views. The loss of private views from development is expected in an urban environment.

Regulatory Compliance Measures

As discussed in *Regulatory Setting*, the City has extensive established regulatory requirements related to preserving valued scenic views/vistas and scenic quality/visual character. Among those, future housing development accommodated by the Housing Element Update, would be required to comply with the following RCMs, as applicable:

- **RCM-AE-1 (Hillside):** To ensure consistency with the Baseline Hillside Ordinance, development projects are required to comply with the City's Hillside Development Guidelines, including, but not limited to, setback requirements, residential floor area maximums, height limits, lot coverage and grading restrictions.

- **RCM-AE-2 (LA River):** Compliance with provisions of the Los Angeles River Improvement Overlay District. Development projects are required to comply with development regulations set forth in Section 13.17.F of the Los Angeles Municipal Code (LAMC) as applicable, including, but not necessarily limited to, landscaping, screening/fencing, and exterior site lighting.
- **RCM-AE-3 (Vandalism):** Compliance with provisions of the Los Angeles Building Code. Development projects are required to comply with all applicable building code requirements, including the following:
    - Every building, structure, or portion thereof, shall be maintained in a safe and sanitary condition and good repair, and free from, debris, rubbish, garbage, trash, overgrown vegetation or other similar material, pursuant to LAMC Section 91.8104.
    - The exterior of all buildings and fences shall be free from graffiti when such graffiti is visible from a street or alley, pursuant to LAMC Section 91.8104.15.
- **RCM-AE-4 (Signage):** Compliance with provisions of the Los Angeles Building Code. Development projects are required to comply with the LAMC Section 91.6205, including on-site signage maximums and multiple temporary sign restrictions, as applicable.
- **RCM-AE-5 (Temporary Signage on Temporary Construction Walls):** Compliance with provisions of the Los Angeles Building Code. Development projects are required to comply with the LAMC Section 14.4.17, including, but not limited to, the following provisions:
    - The applicant is required to obtain a permit for any temporary sign on a temporary construction wall.
    - The area of the sign cannot extend above the top of the wall or fence and is required to comply with the requirements under Section 14.4.17.B.
    - Signs are to remain for as long as the building permits associated with the construction site remain in effect or for a period of two years, whichever is less.
    - Signs may only be placed to a maximum height of eight feet.
    - Temporary signs surrounding vacant lots are limited to lots located in a commercial or industrial zone.
- **RCM-AE-6 (Outdoor Lighting Affecting Residential Property):** Compliance with provisions of the Los Angeles Electrical Code. Development projects are required to comply with the LAMC Section 93.0117 which regulates lighting intensity or direct glare and is applicable to any exterior light source, lamp holder, or sign light source.

- **RCM-AE-7 (Height of Building or Structures):** Compliance with provisions of the Los Angeles Height Districts and any additional applicable provisions regulating height or massing in Specific Plan Areas. Development projects are required to comply with LAMC Sections 12.21.1 through 12.21.6, and any applicable Specific Plan regulation (as enumerated in LAMC Section 12.04), in which the total floor area, number of stories, and overall height cannot exceed those limits for the district in which the building or structure is located.
- **RCM-AE-8 (Coastal Development Permits):** Compliance with provisions of the LAMC Section 12.20.2, which enforces the California Coastal Act of 1976 and helps protect the State's natural and scenic resources along in coastal zones. Development project applicants are required to apply for, and obtain, a Coastal Development Permit for any development in the Coastal Zone.
- **RCM-AE-9 (Site Plan Review):** Compliance with provisions of Section 16.05, which requires a site plan review for any project that creates, or results in, an increase of 50 or more dwelling units or 50,000 gross square feet or more of nonresidential floor area. Development project applicants are required to obtain a site plan review prior to issuance of any grading permit, foundation permit, building permit, or use of land permit.

Project Impacts

Threshold 4.1-1	Would the Housing Element Update have a substantial adverse effect on a scenic vista?

Impact 4.1-1 Housing development accommodated under the Housing Element Update would allow for greater development height and intensity, which may impact scenic vistas. However, changes to existing views would be incremental due to the built-out nature of the City. In addition, housing development projects would be required to be consistent with all applicable regulatory compliance measures, plans and policies that protect scenic vistas. Therefore, potential impacts to scenic vistas would be ***less than significant.***

As identified in the *Environmental Setting* section, scenic views and vistas are located throughout the City. Some areas containing prominent scenic views and vistas in the City include Pacific Palisades, Pacoima Wash, San Gabriel Mountains, Santa Susana Mountains, San Pedro's coastal bluffs, Griffith Park, and Elysian Park. Public views of scenic resources in the City, such as the Pacific Ocean or mountainous areas, are available from segments of some freeways, major roads such as Pacific Coast Highway and Mulholland Drive, some local roads, and public areas such as parks and beaches.

The Housing Element Update involves the potential construction and operation of up to 420,327 housing units through 2029. Based on the City's existing growth strategy, rezoning under the Housing Element

Update would occur in areas near transit corridors and stations, job centers, neighborhood services and amenities, and particularly in higher resource areas that are urbanized and generally lack scenic vistas. Nevertheless, housing development accommodated under the Housing Element Update could also occur outside of these corridors, such as in hillside areas and the low-density single-family areas located throughout the City where scenic vistas could potentially be present.

As previously stated, the Rezoning Program under the Housing Element Update identifies opportunities for rezoning or development incentives in areas that are located in a TPA, near major job centers, and in higher resource areas (see Figure 3-5 of the Project Description). Mid- and high-rise development in these areas would be typically visible from no more than several blocks away due to the presence of intervening development. High-rise buildings may be visible from longer distances, but at more than several blocks away, a single building would represent a small proportion of the overall vista and thus would not substantially alter views of more distant scenic resources such as mountains. However, in general, increases in building height would not obstruct public views of scenic resources or vistas because scenic vistas generally are not available in these urbanized areas and, where vistas are available, new development would be consistent with the current urban landscape and thus would not substantially alter the nature of existing views along public rights-of-way or from other public view locations. Construction would largely involve infill development in already densely developed areas and preservation of open space areas and historical structures would be prioritized. Furthermore, each land use designation would contain specific form districts that regulate the permitted height of structures. Consequently, any change to the existing views of scenic vistas due to taller development would be incremental since these views are already largely obstructed by existing development. Any changes to existing views of urban streetscapes would also be incremental since most existing streetscape views are limited to close-foreground views and are relatively unaffected by increased building height.

For housing development accommodated under the Housing Element Update in existing low-density areas, construction of single-family units, ADUs and conversion/rehabilitation projects would be the primary types of housing that would most likely occur, which could alter existing scenic vistas, particularly in hillsides and areas near the Pacific Ocean. Some additional new multi-family development and mixed-use development could also be accommodated in these areas as a result of the Rezoning Program, though rezoning is not anticipated in low-density Hillside Areas or in areas vulnerable to sea level rise. However, scenic protection provisions are contained in the City's RCMs listed previously under *Regulatory Compliance Measures*. In particular, RCM-AE-1 (Hillside), RCM-AE-6 (Outdoor Lighting Affecting Residential Property), RCM-AE-7 (Height of Building or Structures), RCM-AE-8 (Coastal Development Permits), and RCM-AE-9 (Site Plan Review) would be required for discretionary and ministerial projects, including larger infill projects throughout the City.

The community plans provide additional protections, such as height limits and building setback requirements, that would apply to all discretionary and ministerial projects. In addition to community plans, other planning mechanisms, such as overlays and specific plans, regulate potential impacts to scenic resources. For example, the Mulholland Drive Scenic Parkway contains ordinances and design provisions intended to protect the natural resources, neighborhood visual ambience, and public views. These plans and policies are consistent with the General Plan Framework Elements' goals and policies that are intended to protect scenic vistas in low- and high-density areas throughout the City. The *Land Use Element*, for instance, includes policies that require new development in single-family and special-use neighborhoods to maintain the predominant and distinguishing characteristics, such as property setbacks and building scale. The *Conservation Element* includes objectives, policies, and programs related to land form and scenic vistas to protect and reinforce natural and scenic vistas through permit processing, enforcement, and environmental review of project designs to ensure that natural features and views are retained; and policies under the *Urban Form and Neighborhood Design Element* aim to protect scenic vistas by encouraging the use of step-backs for higher floors of buildings, promoting the use of underground utilities, and establishing standards for transitions in heights of buildings. Therefore, compliance with applicable RCMs, policies and regulations would minimize potential impacts to scenic vistas. Nothing in the Housing Element Update would affect these regulations and rezones would need to be consistent with the General Plan policies pursuant to Charter Section 556 and 558 and would be expected to be subject to the specific plans, overlays and other regulations that are intended to protect scenic views and vistas.

The types of housing units accommodated by the Housing Element Update would generally fall into five categories of development projects - multi-family residential development; single-family residential development; ADUs; mixed-use development; and conversion and/or rehabilitation of existing nonresidential, residential, and mixed-use structures to be used for housing.

The potential to impact scenic vistas would vary according to the housing project type and the location of the housing. A discussion of the potential impacts anticipated from each of these different project types follows. In addition, the discussion provides examples of the impacts associated with various housing and mixed-use projects from previous CEQA documents that have been adopted by the City.

- **Multi-family residential:** Multi-family residential projects may range in size from small apartment buildings with 2-10 units to larger apartment buildings and high-rise structures with hundreds of units. Multi-family projects of any size could potentially impact scenic vistas in hillside and coastal communities. However, multi-family developments are generally located in urbanized areas where the visual quality is dominated by dense commercial and residential development. New high-rise multi-family structures would be visible from publicly accessible vantage points, such as the Hollywood Hills, surrounding freeways, and Griffith Park. However, such development would add to and be

consistent with the existing urban skyline of in the dense urban areas of Los Angeles, such as Hollywood and Central City.

As listed in Table 4-2, the 713 E 5th Street EIR analyzed a multi-family development with 51 housing units on a 5,506-suqare foot site located in the Central City Community Plan area. The analysis in the Initial Study found that the potential impacts to scenic vistas were less than significant based on the following:

Development of the Project would demolish the existing three-story building and construct an eight-story building. The increased height and mass of the proposed building on the Project Site would be visible from more distant locations and could, as a result, intermittently block longer-range views of the downtown Los Angeles skyline and the Santa Monica Mountains. With regard to the downtown skyline, while the proposed building would intermittently block portion of the skyline as viewed from areas east of the Project Site, they would not completely obscure views of the skyline. Furthermore, the proposed building would contribute to the existing fabric of the downtown urban development. With regard to the Santa Monica Mountains, as previously discussed, any such views are very limited and intermittent and are primarily only available from public roadways, not from across the Project Site.

From longer range public viewpoints from the Santa Monica Mountains, the Project, if visible at all, would reflect and be consistent with existing downtown urban development. In general, when long-range views are available from areas within the Santa Monica Mountains, they are typically expansive and panoramic and, therefore, not sensitive to individual development projects (i.e., an individual project alone would not cause an expansive blockage of long-range views from the Hollywood Hills). As such, an individual infill development, similar to the Project, would not block the broader views of the urban landscape from the Santa Monica Mountains.

As discussed in Attachment A, Project Description, of this Initial Study, the Project would remove the Edward Hotel, which was identified as a Contributor to the potentially eligible Fifth Street Single Room Occupancy Historic District and is considered a potentially historical resource and a visual resource. Therefore, its removal is considered the loss of a recognized view.

Based on the analysis above, the Project would eliminate existing views of the Edward Hotel, a potentially historic resource. No other valued views would be eliminated or obstructed by the Project. As discussed in Response to the Checklist Questions V.a., below, potential impacts to historical resources will be addressed in the Draft EIR. However, Section 21099 of the PRC does not include impacts to historical or cultural resources. Therefore, the Project's impacts to views and scenic views would not be considered significant and no mitigation measures are required. Thus, no further evaluation of this topic in an EIR is required.

- **Single-family residential:** Single-family residential projects may range in size and scale from smaller or larger single-family homes to small-lot subdivisions and multi-property single-family subdivisions. Single-family developments of any size could result in impacts to scenic vistas. Small single-family projects would likely occur in residential areas throughout the City and are the most likely type of housing development that would occur in hillside and coastal areas that could have scenic vistas. Regardless of the type of single-family development, projects would be required to comply with applicable regulations, including the RCMs stated previously, to avoid or minimize potential impacts associated with scenic vistas, in particular the hillside and building height RCMs. In addition, the Rezoning Program under the Housing Element Update would be required to be consistent with applicable goals and policies set forth by the City's General Plan. Those policies and goals include Chapter 6, *Open Space and Conservation*, of the Framework Element includes Policy 6.1.2c which requires preservation of natural viewsheds, whenever possible, in hillside and coastal areas. In addition, under a specific plan or community, there are detailed regulations, guidelines and standards for development. For example, the Mulholland Drive Specific Plan includes design guidelines in support of the goal to preserve and enhance the natural character of the Santa Monica Mountains and the scenic hillside character of the Mulholland scenic parkway. The specific development guidelines include, but are not limited to, topography, slopes, grading, building heights, and fencing (Los Angeles 2003). Another example is Policy 1-3.2 of the Brentwood-Pacific Palisades Community Plan, which aims to preserve existing views in hillside areas (Los Angeles 2016b). Single-family developments accommodated under the Housing Element Update would be required to comply with all applicable policies, regulations and standards. The Housing Element Update is not changing regulations related to protected views and would not be anticipated to result in new development inconsistent with those regulations.

  As listed in Table 4-2 in Section 4, *Environmental Analysis*, the 1209 6th Avenue EIR analyzed a Small-Lot development with two single-family units on a 5,005-square foot lot located in the Venice Community Plan area. The analysis in the Initial Study found that the potential impacts to scenic vistas were less than significant based on the following:

  > *The nearest scenic vista to the Project Site is the Pacific Ocean, approximately 0.7 miles west of the Site. Due to the relatively flat topography, intervening structures, and the density of development in the Project area, views of the water are not visible from the Site. Although the proposed Project would change the existing views by adding new and taller structures on the Project Site, as compared to the existing conditions, scenic views are typically defined as those that provide expansive views of a highly valued landscape for the benefit of the general public. As such, the proposed Project would not block or otherwise impede an existing view or scenic vista. Impacts would be less than significant and no further analysis is required in the EIR.*

- **ADUs:** ADUs include attached ADUs and detached ADUs of various scales, created through a building addition, new construction, or conversion of existing floor area. ADUs are allowed in any zone that allows residential use, as well as on any site that contains an existing residential use. ADUs can range in maximum height from 16 feet for smaller ADUs to no height limit when the ADU involves conversion of an existing structure. The addition of one or more ADUs are required to comply with all applicable zoning regulations and would not alter views of scenic vistas, primarily because ADUs are typically incorporated into or behind main residences. Developments including ADUs located on hillsides would comply with RCM-AE-1, which requires projects to comply with the City's Hillside Development Guidelines, including, but not limited to, setback requirements, residential floor area maximums, height limits, lot coverage and grading restrictions.

- **Mixed-use development:** Mixed-use development could range in size and scale from neighborhood commercial mixed use with smaller nonresidential uses, to high-rise mixed use with larger nonresidential uses. Mixed use developments would generally be located in urbanized areas which are already built out areas of the City; therefore, additional housing units would not substantially change scenic vistas. Impacts to scenic vistas would be similar to those resulting from development of a typical multi-family development (refer to *multi-family discussion* above). In addition, developers would be required to comply with applicable regulations, including the RCMs stated above, to avoid or minimize potential impacts associated with the visual quality and character of the area/neighborhood. As listed in Table 4-2, the Hollywood Center EIR analyzed a multi-family development with 1,005 housing units located in the Hollywood Community Plan area. The project involved four buildings which ranged in height from 11 to 46 stories. The EIR found that the project was exempt from aesthetic impacts pursuant to PRC 21099(d) but still analyzed impacts to scenic views/vistas. The EIR illustrated the effects of the project with respect to representative public views to the Project Site by preparing view simulations from 14 vantage points. The EIR concluded:

  > *As shown in the discussion and simulations of view impacts, construction and operation of the Project would not significantly block views of the Hollywood Sign, the Hollywood Hills, or the Downtown skyline. While the Project would block some focal views of the historic Capitol Records Building from sections of Ivar Avenue, Hollywood Boulevard, and Argyle Avenue, the Capitol Records Building would continue to be visible from more prominent view locations, such as the Hollywood Hills and the intersection of Hollywood and Vine, or other sections along local streets. Based on the above, the Project or the Project with the East Site Hotel Option would not have a substantial adverse effect on scenic vistas. (Hollywood Center DEIR at IV.A-54.)*

- **Conversion and/or rehabilitation:** Existing nonresidential, residential, and mixed-use structures could be converted or rehabilitated for new residential uses in areas throughout the City. The conversion or rehabilitation of existing properties would typically not involve new construction of additional structures; however, to the extent that a conversion and/or rehabilitation project involves new construction, impacts would be similar to those described above for multi-family residential and mixed-use development projects. A large conversion or rehabilitation project may result in some changes to scenic vistas in a particular area, if it involves substantial exterior changes. However, physical and visual changes are expected to be minor since rehabilitation projects generally involve reconstruction or safety design modifications of older and potentially dilapidated buildings. In addition, developers would be required to comply with applicable regulations, including the RCMs stated above, to avoid or minimize potential impacts associated with scenic vistas. As listed in Table 4-2, the Crossroads Hollywood EIR analyzed a mixed-use project that involved the rehabilitation of the Crossroads of the World and former Hollywood Reporter building in addition to new construction in the Hollywood Community Plan area. The EIR for this project illustrated the effects of the Project with respect to representative public views to the Project Site by preparing view simulations from 17 vantage points. The analysis found that the potential impacts to scenic vistas were less than significant based on the following:

  Existing valued views within the greater Project area could include focal views and panoramic views or vistas of identified visual resources. However, as shown in the visual simulations, such vies are limited, mostly obscured by existing intervening urban features, and generally intermittent in the vicinity of the Project Site. Scenic vistas of visual resources in the Project vicinity are further limited due to the predominantly flat terrain of the vicinity and the dense, intervening development that blocks long-range, expansive views. As previously described, scenic resources within the Project area that are available from public locations include the Hollywood Hills and the Hollywood sign. As illustrated in the views presented above, view of these resources are limited, partial, distant, and/or non-existent. Focal views close the Project Site (beyond the Crossroad of the World complex) include the historic Blessed Sacrament Church and the Hollywood Athletic Club Building, both of which are located east of the Project Site along Sunset Boulevard; and the Hollywood First National Building located north of the Project Site at Hollywood Boulevard and Highland Avenue. The Project Does not substantially obscure public focal views of these resources as illustrated in the view simulations above. The Project's paseo creates a visual axis to the Blessed Sacrament Church bell tower. In addition, none of the roadways within the immediate Project Site are designated as scenic highways.

  […]

  Based on the analysis above, the Project would not substantially obstruct existing valued views of the Hollywood Hills and Hollywood Sign.

Based on a review of the 54 case study projects from Table 4-2, only two of the projects were found to result in significant and unavoidable aesthetics impacts and one project required mitigation. However, only one of those projects had significant or potentially significant impacts to scenic views. The Fig Project DEIR found that the project would have significant unavoidable impact due to the elimination of views of the Flower Drive Historic District which was being partially demolished with the project and was also a historic impact. Otherwise, the EIR found that none of the other potential scenic views would be impacted.

Overall, although housing development under the Housing Element Update would foreseeably result in build out of the RHNA with buildings that have greater heights and density than what currently exists, the increased building heights and density would not result in the loss or obstruction of scenic vistas available from public vista points, and development projects would be required to comply with applicable policies intended to protect scenic vistas due to existing regulatory schemes that will not be affected by the Housing Element Update. Therefore, potential impacts would be ***less than significant***.

Mitigation Measures

No significant impact would occur due to compliance with existing regulations and RCMs; therefore, mitigation is not required.

Threshold 4.1-2	Would the housing development accommodated by the Housing Element Update conflict with applicable zoning and other regulations governing scenic quality; or would any Housing Element Update, Rezoning Program or other Code or plan amendment substantially degrade the visual character or quality of the project area?

Impact 4.1-2 Housing development accommodated by the Housing Element Update would alter the visual character of portions of the City, including changes in land uses, building height, and massing. However, the housing development would be consistent with the goals and policies of the General Plan and changes would likely benefit and generally enhance the visual character of the City. In addition, development under the Housing Element Update would be consistent with applicable zoning and other regulations. The Rezoning Program and other programs in the Housing Element that will result in code amendments or plan amendments would be required to be consistent with Framework Element, Community Plan, and other General Plan policies and goals. The overall impact to the visual character of the City would be ***less than significant.***

Housing development accommodated under the Housing Element Update involves the potential construction and operation of 420,327 housing units through 2029. Based on the City's existing growth strategy, most development sites are likely to be identified along commercial corridors and existing multi-family neighborhoods located in proximity to public transportation. However, development of residences in hillside areas, ADUs or conversion/rehabilitation projects may occur outside of these commercial corridors in the City. Therefore, the analysis below discusses potential conflicts with regulations that govern scenic quality associated with projects in urbanized areas of the City, as well as lower density areas outside of commercial corridors.

Development in More Urbanized Areas

Housing development accommodated by the Housing Element Update would facilitate an increase in housing throughout the City and would generally involve increased building heights and development intensities. This would result in greater intensification of development in areas of the City beyond that which already exists. Figure 4.1-2 and Figure 4.1-3 show the general layout of the City's land use designations and zoning. Changes to visual character in the City would result primarily from increased building height and massing, and changes in land uses to allow residential development under the Housing Element Update, in particular the Rezoning Program.

As discussed in Section 3, *Project Description*, the City is prioritizing the identification of sites for rezoning in High Resource and Very High Resource Areas shown in Figure 3-5, in particular portions of those areas that are not environmentally sensitive; meaning they are not located in a VHFHSZ or areas with vulnerability to sea level rise, which include West Los Angeles and along the Wilshire Corridor from Santa Monica to Downtown; the southeast portion of the San Fernando Valley along Ventura Boulevard; and pockets in other areas, such as the Warner Center, Northridge and Northeast Los Angeles. These areas are characterized by medium- to high-density development with a wide range in land uses and building heights. Development trends in the City emphasize infill development and higher density residential and mixed-use development; implementation of the Proposed Project would continue this trend. As such, housing development accommodated by the Proposed Project would be congruent with existing development patterns, and higher density residential and mixed-use development would be visually consistent with adjacent existing uses in urbanized areas.

Future residential developments on existing opportunity sites (the majority of the housing development accommodated by the Housing Element) would need to comply with existing applicable zoning (i.e., floor area ratio [FAR], building heights and setbacks, transitional height requirements, and overlay zones), including all of the RCMs identified above, that govern scenic quality, such as hillside development, building heights, lighting, and signage regulations. In addition, all development is subject to applicable

Figure 4.1-2 Land Use Designations in the City

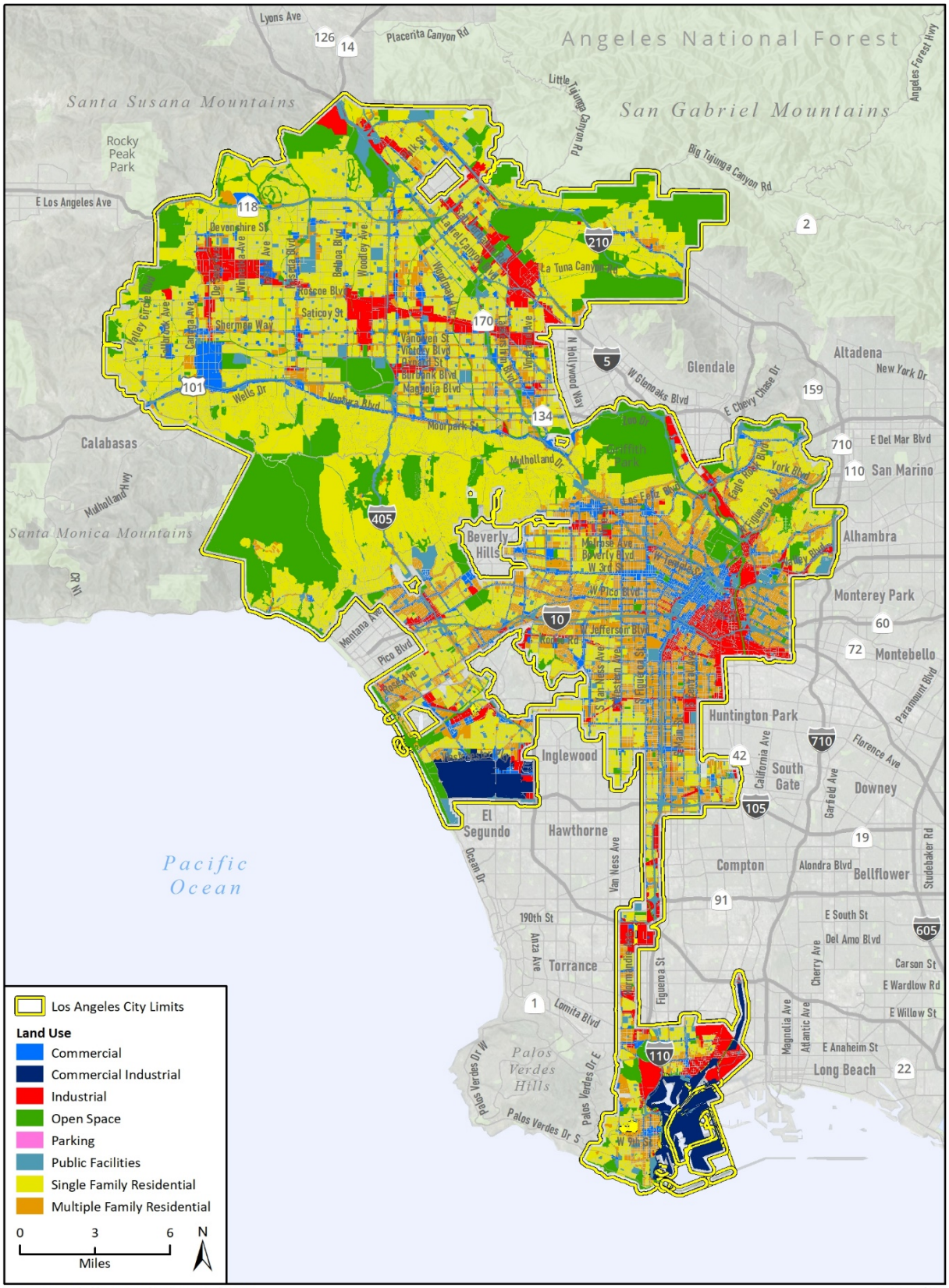
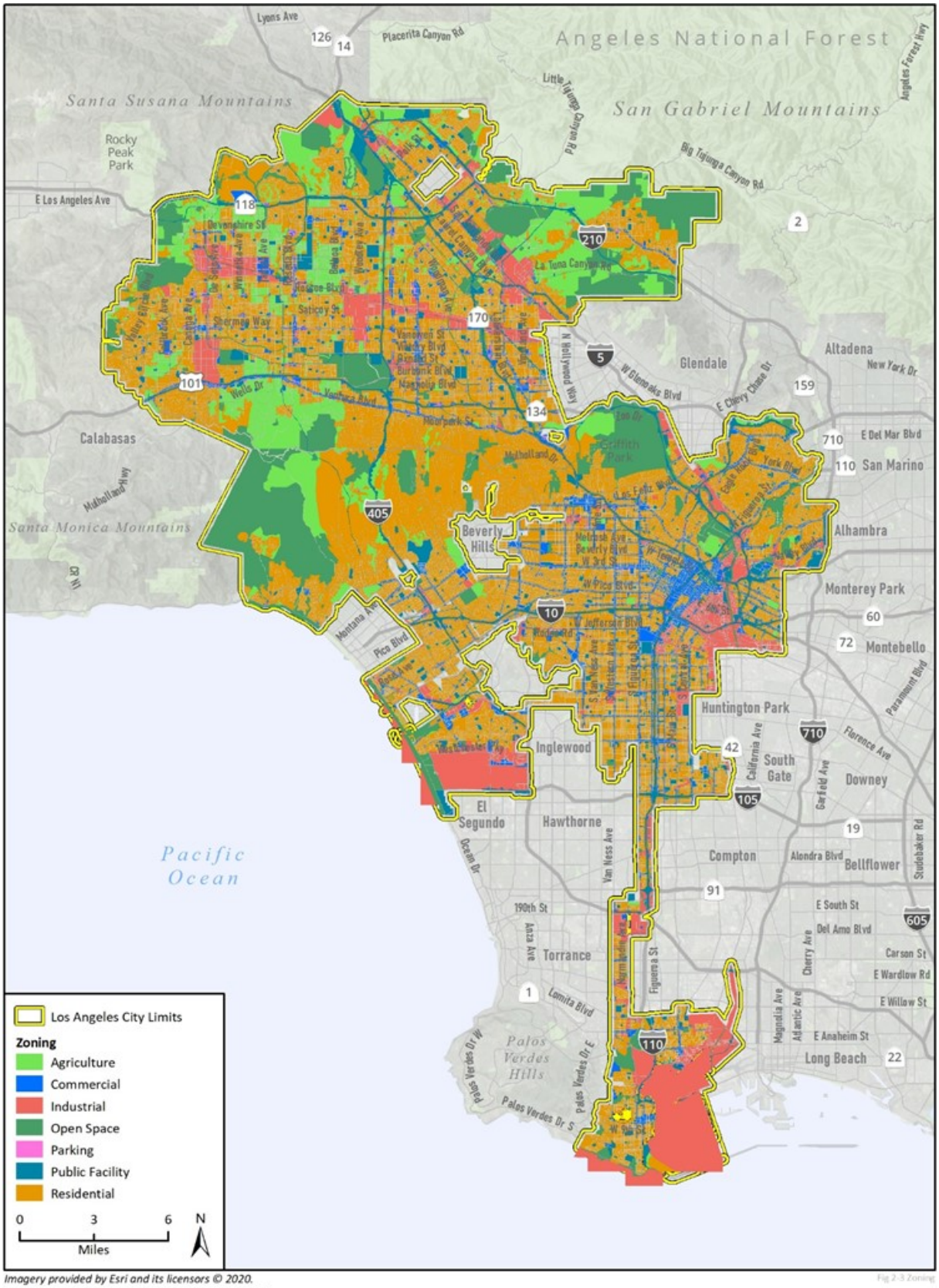


Figure 4.1-3 Zoning Map of the City



regulations, policies and standards set forth by the community plans, specific plans, and special districts. The design guidelines for future development within the separate community plan areas take into consideration specific aesthetic conditions in order to preserve and enhance the visual character and quality in each plan area. In addition, for projects that include historic resources or are located in a historic district, the City's review and regulations governing the historic resource will apply, which may also pertain to the scenic quality of a site or community. Refer to Section 4.4, *Cultural Resources*, for a detailed analysis.

Generally, the goals and policies under the Housing Element Update intend to minimize the effects of land use and zone changes on the existing character of neighborhoods in the City and enhance overall visual character and quality. The Housing Element Update includes revisions to the existing goals and policies under the Housing Element; the following updated goals and policies apply to aesthetics and scenic quality:

GOAL 3: A City in which housing creates healthy, livable, sustainable, and resilient communities that improve the lives of all Angelenos.

Policies

3.1.1 Provide incentives and financial support for the preservation of historic residential structures, particularly for lower income households.

3.1.2 Promote new development that furthers Citywide Housing Priorities in balance with the existing architectural context.

3.1.3 Develop and implement design standards that promote quality residential development.

3.1.8 Expand designation of historic, architectural, and cultural resources in neighborhoods with a high concentration of historic properties and few historic protections, particularly in communities of color.

3.2.1 Promote the integration of housing with other compatible land uses at both the building and neighborhood level.

Adherence to existing design guidelines and regulations would minimize potential adverse effects from the Proposed Project with respect to scenic quality.

In addition, the Rezoning Program would carry out Goal 1 of the Housing Element Update which aims to provide an ample supply of housing to create more equitable and affordable options that meet the City's existing and projected housing needs. The Rezoning Program identifies and recommends rezoning for approximately 220,000 units by October 30, 2024. The Program will carefully consider the creation of a diversity of housing types to expand more naturally affordable and deed-restricted affordable options. Specific Rezoning Program concepts that will be further developed with significant community input

include focusing rezoning strategies on commercial and residential corridors, areas zoned for Parking (P), transitional residential areas off commercial boulevards, in existing regional centers, on public and religious-owned land, and in other areas where multifamily, and therefore affordable housing, is not permitted today. The Rezoning Program is anticipated to be implemented through a number of work efforts including updates to up to 16 Community Plans, two Specific Plans, as well as at least one citywide ordinance that will create additional zoning capacity through an expansion of affordable housing incentive programs or other zoning code amendments that will be consistent with Framework Element and other General Plan policies and goals. Adherence to design guidelines and regulations would minimize potential adverse effects from the Proposed Project with respect to scenic quality.

Development in Low Density Areas

As discussed above, most foreseeable housing development, including those resulting from the Rezoning Program under the Housing Element Update, would likely occur along existing high-density commercial corridors and existing multi-family neighborhoods. However, the Proposed Project to build out the RHNA would accommodate housing development throughout the City, and the Rezoning Program may result in increased residential intensity in certain lower-density neighborhoods (in particular in the High and Highest Resource Areas shown in Figure 3-5 which are not located in a VHFHSZ or area vulnerable to sea level rise), so the build out of housing during the Housing Element Plan horizon that would meet the RHNA could be built anywhere housing is currently allowed. Therefore, housing development would also occur in low-density areas of the City during the eight-year planning period, which may include, but are not limited to, hillside areas or areas that are adjacent to open and natural spaces. Development in these areas would increase development intensity and would likely primarily consist of ADUs, low scale residential development, or conversion/rehabilitation projects.

As shown in Figure 4.1-2 and Figure 4.1-3, residential use, in particular single-family residential, is the dominant land use throughout the City. Thus, the development of single-family residences, low-density multi-family units, or other low scale residential development, such as ADUs and rehabilitation/conversion

projects, under the Housing Element Update could occur throughout the City. ADUs are typically incorporated into or behind main residences, which would not substantially affect the existing visual quality of an area. In addition, rehabilitation and conversion projects involve re-construction and design efforts to older buildings without substantially increasing building massing and scale. Development facilitated by the Proposed Project would be required to comply with existing State and local regulations, including the RCMs mentioned above, which would avoid or minimize potential impacts to the visual quality and character of a project site developed in a lower density area. Therefore, housing development

accommodated by the Housing Element Update would not conflict with regulations governing scenic quality in low-density areas.

The types of housing units accommodated by the Housing Element Update would generally fall into five categories of development projects - multi-family residential development; single-family residential development; ADUs; mixed-use development; and conversion and/or rehabilitation of existing nonresidential, residential, and mixed-use structures to be used for housing. Based on the 54 case study projects from Table 4-2, none of the projects was found to result in significant and unavoidable aesthetics impacts related to visual character. The potential to impact visual quality would vary according to the housing project type and the location of the housing. A discussion of the potential impacts anticipated from each of these different project types is discussed below. In addition, the discussion provides examples of the impacts associated with various housing and mixed-use projects from previous CEQA documents that have been adopted by the City.

- **Multi-family residential:** Multi-family residential projects may range in size from small apartment buildings with 2-10 units to larger apartment buildings and high-rise structures with hundreds of units. Development of multi-family projects of any size would potentially impact the existing visual quality and character in communities throughout the City. Multi-family developments are generally located in urbanized areas where the visual quality is dominated by dense commercial and residential development. Although the densities and intensities would increase with development under the Housing Element Update, additional housing units in these areas would not substantially change the existing urbanized visual quality of the area or conflict with existing zoning. In addition, developers would be required to comply with applicable regulations, including the RCMs stated above. As listed in Table 4-2, *Previous City of Los Angeles Housing Projects & CEQA Impact Determinations*, the Hollywood Center EIR prepared in 2020 analyzed a multi-family development with 1,005 housing units located in the Hollywood Community Plan area. The EIR for this project concluded that the project would have a less than significant impact related to visual quality because it would comply with all applicable City regulations, including the restrictions and guidelines in the LAMC governing lighting, tree replacement, the Hollywood Signage Supplemental Use District (HSSUD), and, in the instance of the Hollywood Center EIR, the Community Plan's Objective 7 to preserve Hollywood's open space resources. The EIR provided the following analysis and impact conclusion for this impact:

  > *The Project is located within an urbanized area and, as such, the concern of this threshold is whether the Project would conflict with regulations that govern scenic quality. These include LAMC street tree replacement, lighting and signage regulations, regulations pertinent to the HSSUD, applicable policies of the Hollywood Community Plan, and regulations that govern building mass. … the Project would provide for tree replacement in accordance LAMC Section 12.21 G.2, which currently requires street tree replacement*

on a 2:1 basis. As such, the Project would not conflict with this regulation that governs scenic quality. Per AES-PDF-2, mechanical, electrical, and roof top equipment (including HVAC systems), as well as building appurtenances, would be integrated into the Project's architectural design (e.g., placed behind parapet walls) and be screened from view from public rights-of-way, as required by the LAMC, where applicable.

The Project must comply with lighting regulations that govern the orientation and intensity of outdoor lighting, such as illuminated signage, pursuant to LAMC Section 14.4.4 E, and the intensity of exterior lighting at windows and decks of off-site, adjacent residential units, or residential outdoor spaces used for recreational purposes, pursuant to LAMC Section 93.0117(b). A plan for any new street lighting would be submitted to and must be approved by the Bureau of Street Lighting to ensure that adjacent properties, such as adjacent, off-site residential uses would not be adversely impacted in accordance with City standards. In addition, all proposed illuminated signs would be reviewed by the City to ensure that lighting would not produce a light intensity of greater than three foot-candles above ambient lighting at the property line of the nearest residentially-zoned property.

The Project must also comply with the HSSUD, which is intended to reflect the contribution of signage to the distinctive aesthetic of the Hollywood Boulevard neighborhood, as well as to control the blight created by former poorly placed, badly designed signs. The Project anticipates minimum signage. However, all signage plans would be submitted for review and must receive sign-off by the Department of City Planning or Director.

The Project is evaluated in relation to the City's lighting regulations and the HSSUD under Threshold (d), below. As discussed therein, the Project would comply with regulations pertinent to exterior lighting and signage and, as such, would not conflict with these regulations.

Further, the Project would also not conflict with Objective 7 of the Hollywood Community Plan, which states: "To encourage the preservation of open space consistent with property rights when privately owned and to promote the preservation of views, natural character and topography of mountainous parts of the Community for the enjoyment of both local residents and persons throughout the Los Angeles region." Objective 7 is the only policy in the Community Plan pertinent to scenic quality. As illustrated in Figure IV.A18, the Project would be sufficiently distant from public view and open space areas in the vicinity of Mulholland Drive, a City of Los Angeles Scenic Parkway, that it would not block the scenic vista, consisting of the Hollywood Bowl, the Hollywood Community, the Downtown Los Angeles skyline, and the overall Los Angeles Basin from the Mulholland Drive Scenic Parkway. In addition, as illustrated in simulated views from Quebec Drive (Figure IV.A-7), from Argyle Avenue at Holly Mont Drive (Figure IV.A-8), from Bonair Place (Figure IV.A-15), and from the Yamashiro Restaurant driveway (Figure IV.A-16), the Project would form a background feature but would not block the view field from the City's hillside neighborhood streets.

As discussed under Threshold (a), above, the Project would be visible from open space, such as the Mulholland Drive Scenic Parkway at the Jerome C. Daniel/Hollywood Bowl overlook and some hillside neighborhoods. However, it would not fill a large percentage of the view field, block distant or horizon views, or change the character of the Community's open space, which is located primarily within the Hollywood Hills. Because the street corridors with views toward the Project Site do not include prominent or significant views of the Hollywood Sign, the Project would not have the potential to substantially block any significant existing views of the Hollywood Sign. Also, with limited available views of the Hollywood Hills through nearby street corridors or across the Project Site, the Project would not block any significant existing views of the Hollywood Hills through street corridors. Finally, the Project would not adversely impact views or change the natural character and topography of mountainous parts of the Hollywood Community and would not conflict with the objective of the Community Plan to provide enjoyment of open space by both local residents and persons throughout the Los Angeles region.

Therefore, the Project or the Project with the East Site Hotel Option would not conflict with LAMC lighting regulations, tree replacement regulations, the HSSUD, or the Community Plan's Objective 7 to preserve Hollywood's open space resources. Therefore, impacts with respect to conflicting with regulations that govern scenic quality would be less than significant.

- **Single-family residential:** Single-family residential projects may range in size and scale from smaller or larger single-family homes to small-lot subdivisions and multi-property single-family subdivisions. Single-family developments of any size could result in changes to the visual quality and character of a neighborhood. Small single-family projects would likely occur in residential areas throughout the City and would not result in a substantial increase in residents in a neighborhood. These types of single-family developments would be primarily located in urbanized areas. Single-family developments would also be the most likely to occur in sensitive areas, such as hillsides and coastal areas. However, single-family residential developments would generally occur on infill, underutilized, and vacant isolated sites in established neighborhoods. Therefore, reasonably foreseeable single-family development under the Housing Element Update would not substantially change the visual quality of the area and would be required to comply with the applicable zoning regulations.

  Regardless of the type of single-family development, developers would be required to comply with applicable regulations, including the RCMs stated above, to avoid or minimize potential impacts associated with visual quality and character. As listed in Table 4-2, an example of a single-family development type is the Single-Family Residence Project at 3599 Lankershim Boulevard in Studio City. The project involved development of a two-story single-family residence (approximately 3,826 square feet of residential floor area), including a stacked car-lift four-car garage, on an undeveloped 22,282-square-foot lot. The EIR determined that the project would have a less than significant impact on visual

quality because of the limited visibility, harmonious design, and extent of similar development in the immediate vicinity of the project site. In addition, the project included new landscaping to replace the previous landscaping. The physical and visual changes analyzed under this project were determined to not conflict with LAMC regulations and impacts were determined to be less than significant.

The Hidden Creek Estates project did find a potential impact to visual character but less than significant with mitigation. That project involved the development of 188 single-family residences, including 25 equestrian lots, an 18.7-acre equestrian facility, a 16.1-acre park on a 285-acre site of undeveloped land near Porter Ranch outside the City limits. (Hidden Creek RDEIR at IV.A.2-10.) The EIR found that "permanent conversion of open space are to residential neighborhood, the associated grading activity, and the removal of protected trees on the project site would permanently alter the visual character of the project site in an adverse manner." However, the EIR found that with imposition of the MM-BIO-21 requiring that each protected tree removed be replaced with two trees of the same type would reduce impacts to less than significant. (RDEIR at IV.A.2-11.)

- **ADUs:** ADUs include attached ADUs and detached ADUs of various scales, created through a building addition, new construction, or conversion of existing floor area. ADUs are allowed in any zone that allows residential use, as well as on any site that contains an existing residential uses. ADUs can range in maximum height from 16 feet for smaller ADUs to no height limit when the ADU includes conversion of an existing structure. The addition of one or more ADUs are required to comply with all applicable zoning regulations and would not substantially change the existing visual quality, primarily because ADUs are typically incorporated into or behind main residences. ADUs located on hillsides would comply with RCM-AE-1 which requires projects to comply with the City's Hillside Development Guidelines, including, but not limited to, setback requirements, residential floor area maximums, height limits, lot coverage and grading restrictions.

- **Mixed-use development:** Mixed-use development could range in size and scale from neighborhood commercial mixed use with smaller nonresidential uses, to high-rise mixed use with larger nonresidential uses. Mixed use developments are generally located in urbanized areas which are already built out areas of the City, therefore, additional housing units would not substantially change the visual quality of the area. Impacts to visual quality would be similar to those resulting from development of a typical multi-family development (refer to *multi-family discussion* above. In addition, developers would be required to comply with applicable regulations, including the RCMs stated above, to avoid or minimize potential impacts associated with the visual quality and character of the area/neighborhood.

An example project listed in Table 4-2 is the 668 S. Alameda Street Project, which is a mixed-use development consisting of 475 live/work units and ground-floor commercial space in the Arts District. The project was determined to result in less than significant impacts to visual quality and zoning due to the implementation of project design features that require all loading areas will be conducted interior to the buildings or screened from public view and due to compliance with existing zoning standards. The analysis includes tables that provide the consistency analysis for the goals, objectives and policies that apply to the 668 S. Alameda Street Project. The following are the summaries of the Project's consistency with each applicable planning document or regulation:

City of Los Angeles General Plan Framework

An evaluation comparing the Project to applicable policies of the General Plan Framework is provided in Table 4.1-2, Comparison of the Project to Applicable Policies of the General Plan Framework, below. As shown in Table 4.1-2, The Project would be consistent with Objective 5.5 to enhance the livability of the neighborhood by upgrading the quality of development at the Project Site and improving the quality of the Project Site with new development that contains positive visual elements. The Project would also encourage pedestrian activity through its introduction of a residential population; grocery store, restaurant, and retail uses; incorporation of public art; and potential for art-related activities and shows. The proximity of exterior walls to the sidewalk, pedestrian entrances to retail/restaurant and entrance(s) from adjacent sidewalks, well-lit exteriors along the sidewalks, transparency between ground level retail uses and the sidewalk, screened parking within the podium and subterranean parking structure that would not be visible from public areas would meet Objective 5.8 of the General Plan Framework to reinforce or encourage a strong pedestrian orientation within regional centers. Also, the Project would provide 581 bicycle spaces, including 77 short-term spaces term and 504 long-term spaces, as well as a workspace (i.e., Bike Shop or Bike Spa) for bicycle maintenance. The provision of bicycle facilities would encourage bicycle use in lieu of motor vehicles. The Project would also be consistent with the General Plan policy to 5.8.4 to integrate signage with the architectural character of the Project. The Project would provide 14,537 sf of ground level open space, including landscaped paseos and a plaza, accessible to the public. As such, the Project would be consistent with Policy 6.4.8 regarding enhancement of the open space resources of the neighborhood because the Project would comply with the applicable urban design policies of the General Plan Framework.

[…]

Central City North Community Plan

The Project Site is located within the boundaries of the Central City North Community Plan, which was updated by City Council on December 15, 2000. The Central City Community Plan area includes seven

districts, of which the Project Site is nearest the Artists-in-Residence District, defined as situated between E. 1st Street, the Los Angeles River, E. 6th Street, and S. Alameda Street. More recent local plans, such as the Downtown Los Angeles Neighborhood Council's Your Downtown LA Vision Plan (2015) identifies the Artists-in-Residence District, or "Arts District," as extending south to E. 7th Street. The Community plan encourages the continued and expanded development of a thriving artists-in-residence community. Chapter V, Urban Design, of the Community Plan is to ensure that residential, commercial, and industrial projects and public spaces and rights-of-way incorporate specific elements of good design. The intent is to promote a stable and pleasant environment. In commercial corridors, the emphasis is on the provision and maintenance of the visual continuity of streetscapes and the creation of an environment that encourages pedestrian and economic activity. An evaluation comparing the Project to applicable policies of the Central City North Community Plan is provided in Table 4.1-3, Comparison of the Project to Applicable Policies of the Central City North Community Plan, below.

[…]

The Project would conform to the applicable urban design goals and objectives of the Central City North Community Plan. Specifically, the Project would provide a modern, arts-oriented use that would be complementary to the industrial setting and objectives of the Arts District. The Project would activate the pedestrian environment, provide new open space and pedestrian amenities, and include bicycle parking to reduce vehicle dependency. As shown in Table 4.1-3, the Project would be consistent with the applicable urban design policies set forth in the Central City North Community Plan.

Citywide Design Guidelines

The Project would be consistent with the applicable policies of the Commercial Citywide Design Guidelines for Pedestrian-Oriented/Commercial & Mixed-Use Projects (Design Guidelines). As summarized in Table 4.1-4, Comparison of the Project to Applicable Policies of the Citywide Design Guidelines, the Project would be consistent with applicable Site Plan policies related to site planning and neighborhood linkage by providing a strong wall along the street front, landscaped open space, and primary entrances along the street front. The Project would also enhance neighborhood linkage with the provision of intersecting paseos that connect Industrial Street with Mill Street. The Project would be consistent with Design Guideline policies regarding entrances by providing entryways into ground level grocery store, retail and restaurant uses from adjacent sidewalk. The Project would also be consistent with policies addressing the relationship of the Project to surrounding buildings and would be consistent with the scale and theme of the adjacent ROW DTLA complex, an adaptive reuse of 98-year-old historic industrial buildings.

[…]

As shown in Table 4.1-4, the Project would be consistent with pedestrian scale policies related to building materials, architectural character, off-street parking, open space, landscaping, signage, lighting and security, and other policies related to visual character. The Project would be substantially consistent with the applicable urban design policies of the Citywide Design Guidelines.

Mural Ordinance

The Project anticipates the incorporation of public art/façade treatments, such as original art murals (OAMs), on the Project's street-facing walls, as depicted in Project simulations in Figures 4.1-6 and 4.1-7, above. Murals located on the Project's exterior walls would be registered with the City's Department of Cultural Affairs in compliance with the City's Mural Ordinance (Ord. 182706). As such, the Project would serve the purpose of the Mural Ordinance to increase public access to and community participation in the creation of original works of art and with the underlying intent of the Mural Ordnance is to produce new murals that re-engage communities, especially youth; create new opportunities for muralists; and support mural documentation, presentation, and engagement activities that are interactive, educational, or lead to cultural tourism. Because the Project would incorporate registered OAMs, the Project would be consistent with the requirements of this Ordinance.

River Improvement Overlay District

The Project would be required to comply with the RIO District Overlay Zone Ordinance. At Mill Street, the Project Site is located approximately 0.4 mile from the Los Angeles River and is considered to be within a RIO district. The purpose of RIO Overlay districts is to support the goals of the Los Angeles River Revitalization Plan, particularly on streets leading to the river or interfacing the river. The east edge of the Project Site at Hill Street is located approximately 0.4 mile from the Los Angeles River. Industrial Street and S. Alameda Street do not interface with the river or meet or cross the river and as such, the Project would not affect pedestrian or bicycle access or views of the river. In accordance with the Overlay Zone Ordinance, the Project would submit a landscaping and other plans, as required under the Ordinance. The Project would also meet the LID requirements and other SUSMP requirements of the Overlay Zone (please see Section 4.7, Hydrology and Water Quality, of this Draft EIR). Because the Project would comply with the requirements of the RIO District Overlay Zone Ordinance the Project would be consistent with the requirements of this adopted plan.

- Conversion and/or rehabilitation: Existing nonresidential, residential, and mixed-use structures could be converted or rehabilitated for new residential uses in areas throughout the City. The conversion or rehabilitation of existing properties would typically not involve new construction of additional structures; however, to the extent that a conversion and/or rehabilitation project involves new

construction, impacts would be similar to those described above for multi-family residential and mixed-use development projects. A large conversion or rehabilitation project may result in some changes to the visual quality of a particular area, if it involves substantial exterior changes. However, physical and visual changes are expected to be minor since rehabilitation projects generally involve reconstruction or safety design modifications of older and potentially dilapidated buildings. In addition, developers would be required to comply with applicable regulations, including the RCMs stated above, to avoid or minimize potential impacts associated with the visual quality and character of the area/neighborhood. An example project listed in Table 4-2 is the Crossroads Hollywood Project, a mixed-use project that would rehabilitate Crossroads of the World and the former Hollywood Reporter Building and include new construction to develop 950 residential units with hotel, commercial/retail, office, entertainment, and restaurant uses. The EIR for this project stated that the design of the buildings was found to contribute to the existing visual character of the area, comply with regulations regarding visual quality, and provide landscaped areas that would enhance the visual quality of the area. Therefore, potential impacts were less than significant.

Similar to the example projects discussed above, housing accommodated under the Housing Element Update is expected to comply with applicable zoning and other regulations, and would not result in significant impacts. In addition, as listed above, the policies under Goal 3 applicable to aesthetics and scenic quality under the Housing Element Update intend to minimize the effects of land use and zone changes on the existing character of neighborhoods in the City and enhance overall visual character and quality.

The impacts resulting from the Rezoning Program are not anticipated to result in significant impacts to visual character and quality because the City would prioritize rezoning in existing urbanized areas and would not be rezoning the hillside areas, and any rezoning would be required to be consistent with applicable policies and goals from the General Plan, including the Framework Element and community plans. For instance, under the Brentwood-Pacific Palisades Community Plan, Policy 1-1.2 requires the maintenance of the existing acreage of residential lands designated for single family use, and Policy 1-1.3 requires maintenance of a substantial portion of the single family areas in the minimum density land use category. Additionally, rezoning in lower density/single-family areas would be done in a way to accommodate modest increases in residential density, but would be paired with standards (consistent with existing Framework Element and community plan policies) to ensure appropriate scale, transitions, and character. Therefore, impacts would be ***less than significant.***

Mitigation Measures

No significant impact would occur due to compliance of reasonably anticipated development with existing regulations and RCMs; therefore, mitigation is not required.

4.1.4 CUMULATIVE IMPACTS

The geographic area to analyze cumulatively considerable aesthetic impacts includes the entire City of Los Angeles and immediately surrounding areas. Cumulative projects would include build out of the RHNA and any others approved but not built or in the pipeline including non-housing projects, as well as any other development (non RHNA) built during the plan horizon. Impacts to visual character would be dependent on the specific location in which projects are located. Consequently, changes to the visual character of one area of the City would not alter the visual character of other neighborhoods or otherwise have additive effects on the visual character of another neighborhood. As such, although development across the City may collectively alter the visual character of many of its communities and neighborhoods, cumulative impacts to visual character would not occur.

As discussed under Impact 4.1-1, implementation of the Housing Element Update is not expected to substantially affect the visual character or scenic views or vistas of the City by accommodating housing development that is consistent with the City's standards. Both cumulative residential and non-residential development that would occur through 2029, would be required to comply with existing and future proposed zoning standards. Although it would increase development intensity in some areas of the city, contribution by build out of the RHNA to cumulative aesthetic impacts would not be cumulatively considerable. For the aforementioned reasons and because the Housing Element Update is not expected to alter existing regulations that protect scenic views and vistas or visual character and because the Update includes policies to ensure that new development meets certain applicable standards enhancing visual character, the incremental effects of the Housing Element Update would not be significant.

Based on the above information, the incremental effect of the Proposed Project with respect to visual character would not be cumulatively considerable and there would be ***no significant cumulative impact*** to visual character from the Proposed Project.

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4.2 AIR QUALITY

This section addresses potential impacts to air quality from the Housing Element Update. Both short-term construction emissions and long-term effects related to the ongoing operation of individual development projects are discussed. Air quality data utilized in the preparation of this section is included as Appendix C to this Draft EIR.

As discussed in the Initial Study (see Appendix A), air quality impacts from the Safety Element were found to be less than significant and thus are not discussed in this section.

4.2.1 ENVIRONMENTAL SETTING

Air Quality and Public Health

Certain air pollutants have been recognized to cause notable health problems and consequential damage to the environment either directly or in reaction with other pollutants, due to their presence in elevated concentrations in the atmosphere. Such pollutants have been identified and regulated as part of an overall endeavor to prevent further deterioration and to facilitate improvement in air quality. The National Ambient Air Quality Standards (NAAQS) and California Ambient Air Quality Standards (CAAQS) 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.[1] As the scientific methods for the study of air pollution health effects have progressed over the past decades, adverse effects have been shown to occur at lower levels of exposure. For some pollutants, no clear thresholds for effects have been demonstrated. New findings over time have, in turn, led to the revision and lowering of NAAQS which, in the judgment of the U.S. Environmental Protection Agency (USEPA), are necessary to protect public health. Ongoing assessments of the scientific evidence from health studies continue to be an important part of setting and informing revisions to federal and state air quality standards[2]. The NAAQS and CAAQS are listed under the Regulatory Framework, below.

At the regional level, the South Coast Air Quality Management District (SCAQMD) is the regulatory agency responsible for improving air quality for large areas of Los Angeles, Orange County, Riverside and San Bernardino Counties, including the Coachella Valley.[3] The City of Los Angeles is located within the South

[1] USEPA, NAAQS Table, https://www.epa.gov/criteria-air-pollutants/naaqs-table. Accessed May 2021.
[2] SCAQMD, *Final 2016 AQMP*, 2017. Appendix I-69. https://www.aqmd.gov/docs/default-source/clean-air-plans/air-quality-management-plans/2016-air-quality-management-plan/final-2016-aqmp/appendix-i.pdf?sfvrsn=14. Accessed May 2021.
[3] SCAQMD, *Map of Jurisdiction*, http://www.aqmd.gov/docs/default-source/default-document-library/map-of-jurisdiction.pdf. Accessed May 2021.

Coast Air Basin (Air Basin), which is a distinct geographic subarea within the SCAQMD's jurisdiction. The SCAQMD, together with the Southern California Association of Governments (SCAG), has the responsibility for ensuring that national and state ambient air quality standards are achieved and maintained for the Air Basin. Failure to comply with these standards puts state and local agencies at risk for penalties in the form of lawsuits, fines, a federal takeover of state implementation plans, and a loss of funds from federal agencies such as the Federal Highway Administration and Federal Transit Administration. To meet the air quality standards, regional plans are developed, including the SCAQMD's Air Quality Management Plan (AQMP), which incorporates regional demographic projections and integrated regional land use and transportation strategies from SCAG's Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS). These plans work together to examine multiple pollutants, cumulative effects, and transport issues related to attaining healthful air quality in the region. In addition, a host of regulatory standards at the federal, state, regional, and local level function to identify and limit exposure of air pollutants and toxic air contaminants.

Local Air Quality and Air Pollution Sources

As mentioned above, the City of Los Angeles is located within the South Coast Air Basin, which is 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 and the non-desert portions of Los Angeles, Riverside, and San Bernardino Counties, in addition to the Coachella Valley area in Riverside County. The regional climate within the Air Basin is considered 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 and a wide range of emissions sources, such as dense population centers, heavy vehicular traffic, and industry.

The Basin experiences a persistent temperature inversion (increasing temperature with increasing altitude) as a result of the Pacific high. This inversion limits the vertical dispersion of air contaminants, holding them relatively near the ground. As the sun warms the ground and the lower air layer, the temperature of the lower air layer approaches the temperature of the base of the inversion (upper) layer until the inversion layer finally breaks, allowing vertical mixing with the lower layer. This phenomenon is observed in mid to late afternoons on hot summer days. Winter inversions frequently break by midmorning.

The combination of stagnant wind conditions and low inversions produces the greatest pollutant concentrations. On days of no inversion or high wind speeds, ambient air pollutant concentrations are lowest. During periods of low inversions and low wind speeds, air pollutants generated in urbanized areas are transported predominantly onshore into Riverside and San Bernardino counties. In the winter, the

greatest pollution problem is the accumulation of carbon monoxide (CO) and nitrogen oxides (NO_X) due to low inversions and air stagnation during the night and early morning hours. In the summer, the longer daylight hours and the brighter sunshine combine to cause a reaction between hydrocarbons and NO_X to form photochemical smog.

Air pollutant emissions within the Air Basin are generated primarily by stationary and mobile sources. Stationary sources can be divided into two major subcategories: point and area sources. Point sources occur at a specific location and are often identified by an exhaust vent or stack. Examples 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. 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, and self-propelled construction equipment. Air pollutants can also be generated by the natural environment, such as when high winds suspend fine dust particles.

Criteria Air Pollutants

The six principal pollutants for which national and state criteria and standards have been promulgated, known as "criteria pollutants", and which are most relevant to current air quality planning and regulation in the Air Basin include: ozone (O_3), respirable and fine particulate matter (PM_{10} and $PM_{2.5}$, respectively), carbon monoxide (CO), nitrogen dioxide (NO_2), sulfur dioxide (SO_2), and lead (Pb). These pollutants are referred to as "criteria air pollutants" as a result of the specific standards, or criteria, which have been adopted for them.

Ozone (O_3)

O_3 is a gas that is formed when volatile organic compounds (VOCs) and nitrogen oxides (NO_X) - both 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. An elevated level of O_3 irritates the lungs and breathing passages, causing coughing and pain in the chest and throat, thereby increasing susceptibility to respiratory infections and reducing the ability to exercise. Effects are more severe in people with asthma and other respiratory ailments. Long-term exposure may lead to scarring of lung tissue and may lower lung efficiency.

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

Particulate matter pollution consists of very small liquid and solid particles floating in the air, which can include smoke, soot, dust, salts, acids, and metals. Particulate matter can form when gases emitted from industries and motor vehicles undergo chemical reactions in the atmosphere. 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 areas like the City of Los Angeles, most particulate matter is caused by road dust, diesel soot, combustion products, abrasion of tires and brakes, and construction activities. The human body naturally prevents the entry of larger particles into the body. However, small particles can enter the body and become trapped in the nose, throat, and upper respiratory tract. These small particulates can potentially aggravate existing heart and lung diseases, change the body's defenses against inhaled materials, and damage lung tissue. The elderly, children, and those with chronic lung or heart disease are most sensitive to PM_{10} and $PM_{2.5}$. Lung impairment can persist for two to three weeks after exposure to high levels of particulate matter. Some types of particulates can become toxic after inhalation due to the presence of certain chemicals and their reaction with internal body fluids.

Carbon Monoxide (CO)

CO is a colorless, odorless gas primarily emitted from combustion processes and motor vehicles due to incomplete combustion of carbon-containing fuels such as gasoline or wood. In urban areas, such as the City of Los Angeles, automobile exhaust accounts for the majority of CO emissions. 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 Air Basin. The highest ambient CO concentrations are generally found near congested transportation corridors and intersections. Elevated concentrations of CO weaken the heart's contractions and lower the amount of oxygen carried by the blood. It is especially dangerous for people with chronic heart disease. Inhalation of CO can cause nausea, dizziness, and headaches at moderate concentrations and can be fatal at high concentrations.

Nitrogen Dioxide (NO2)

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 areas, such as urban areas like the City of Los Angeles, may be exposed to higher concentrations of NO_2 than those indicated by regional monitors. NO_2 absorbs blue light and results in a brownish-red cast to the atmosphere and reduced

visibility. NO_2 also contributes to the formation of PM_{10}. Nitrogen oxides irritate the nose and throat, and increase one's susceptibility to respiratory infections, especially in people with asthma. The principal concern of NO_X is as a precursor to the formation of O_3.

Sulfur Dioxide (SO2)

Sulfur oxides (SO_X) are compounds of sulfur and oxygen molecules. SO_2 is the predominant form found in the lower atmosphere and is a product of burning sulfur or burning materials that contain sulfur. Major sources of SO_2 include power plants, large industrial facilities, diesel vehicles, and oil-burning residential heaters. Generally, the highest levels of SO_2 are found near large industrial complexes. In recent years, SO_2 concentrations have been reduced by the increasingly stringent controls placed on stationary source emissions of SO_2 and limits on the sulfur content of fuels. Emissions of SO_2 aggravate lung diseases, especially bronchitis. It also constricts the breathing passages, especially in asthmatics and people involved in moderate to heavy exercise. SO_2 potentially causes wheezing, shortness of breath, and coughing. High levels of particulates appear to worsen the effect of SO_2, and long-term exposures to both pollutants leads to higher rates of respiratory illness.

Lead (Pb)

Lead is a metal found naturally in the environment as well as in manufactured products. The highest levels of lead in air are usually found near lead smelters. The major sources of lead emissions to the air are ore and metals processing and piston-engine aircraft operating on leaded aviation gasoline. Lead is also emitted from the sanding or removal of old lead-based paint. Lead emissions are primarily a regional pollutant. Lead affects the brain and other parts of the body's nervous system. Exposure to lead in very young children impairs the development of the nervous system, kidneys, and blood forming processes in the body.

Health Effects of Criteria Pollutants

The health effects of criteria pollutants (i.e., O_3, CO, PM_{10} and $PM_{2.5}$, NO_2, SO_2, and Pb) are summarized in Table 4.2-1 and are further discussed in the *Public Health Effects and Sierra Club v. County of Fresno White Paper* included in Appendix D. As discussed above, NAAQS for criteria pollutants are set at a level that protects public health with an adequate margin of safety.

Table 4.2-1 Summary of Health Effects of Criteria Pollutants

Pollutant	General Description
O_3	▪ Aggravation of respiratory and cardiovascular diseases ▪ Reduced lung function ▪ Increased cough and chest discomfort
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
NO_2	▪ Aggravation of respiratory illness
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
SO_2	▪ Aggravation of respiratory diseases (asthma, emphysema) ▪ Reduced lung function
Pb	▪ Behavioral and hearing disabilities in children ▪ Nervous system impairment
Source: SCAQMD, Guidance Document for Air Quality Issues in General Plans and Local Planning, 2005.	

Additional Criteria Pollutants (California Only)

In addition to the national standards, the State of California regulates State-identified criteria pollutants, including sulfates, hydrogen sulfide, visibility-reducing particles, and vinyl chloride. With respect to the State-identified criteria pollutants, most land use development projects either do not emit them (i.e., hydrogen sulfide (nuisance odor) and vinyl chloride), or otherwise account for these pollutants (i.e., sulfates and visibility reducing particles) through other criteria pollutants. For example, sulfates are associated with SO_X emissions, and visibility-reducing particles are associated with particulate matter emissions. A description of the health effects of the State-identified criteria air pollutants is provided below.

Sulfates (SO_4^{2-})

Sulfates are the fully oxidized ionic form of sulfur. Sulfates occur in combination with metal and/or hydrogen ions. In California, emissions of sulfur compounds occur primarily from the combustion of petroleum-derived fuels (e.g., gasoline and diesel fuel) that contain sulfur. This sulfur is oxidized during the combustion process and subsequently converted to sulfate compounds in the atmosphere. Effects of sulfate exposure at levels above the standard include a decrease in ventilatory function, aggravation of asthmatic symptoms, and an increased risk of cardio-pulmonary disease. Sulfates are particularly effective

in degrading visibility, and, due to the fact that they are usually acidic, can harm ecosystems and damage materials and property.

Hydrogen Sulfide (H_2S)

H_2S is a colorless gas with the odor of rotten eggs. The most common sources of H_2S emissions are oil and natural gas extraction and processing, and natural emissions from geothermal fields. Industrial sources of H_2S include petrochemical plants and kraft paper mills. H_2S is also formed during bacterial decomposition of human and animal wastes, and is present in emissions from sewage treatment facilities and landfills.[4] Exposure to H_2S can induce tearing of the eyes and symptoms related to overstimulation of the sense of smell, including headache, nausea, or vomiting; additional health effects of eye irritation have only been reported with exposures greater than 50 parts per million (ppm), which is considerably higher than the odor threshold.[5] H_2S is regulated as a nuisance based on its odor detection level; if the standard were based on adverse health effects, it would be set at a much higher level.[6]

Visibility-Reducing Particles

Visibility-reducing particles come from a variety of natural and manmade sources and can vary greatly in shape, size and chemical composition. Visibility reduction is caused by the absorption and scattering of light by the particles in the atmosphere before it reaches the observer. Certain visibility-reducing particles are directly emitted to the air, such as windblown dust and soot, while others are formed in the atmosphere through chemical transformations of gaseous pollutants (e.g., sulfates, nitrates, organic carbon particles) which are the major constituents of particulate matter. As the number of visibility-reducing particles increases, more light is absorbed and scattered, resulting in less clarity, color, and visual range.[7] Exposure to some haze-causing pollutants have been linked to adverse health impacts similar to PM_{10} and $PM_{2.5,}$ as discussed above.[8]

Vinyl Chloride

Vinyl chloride is a colorless gas with a mild, sweet odor. Most vinyl chloride is used to make polyvinyl chloride (PVC) plastic and vinyl products and is generally emitted from industrial processes. Other major sources of vinyl chloride have been detected near landfills, sewage plants, and hazardous waste sites, due to microbial breakdown of chlorinated solvents.[9] Short-term health of effects of exposure to high levels of

[4] California Air Resources Board, Hydrogen Sulfide & Health, https://ww2.arb.ca.gov/resources/hydrogen-sulfide-and-health. Accessed January 23, 2019.
[5] California Air Resources Board, Hydrogen Sulfide & Health.
[6] California Air Resources Board, Hydrogen Sulfide & Health.
[7] California Air Resources Board, Visibility-Reducing Particles and Health, last reviewed October 11, 2016, https://www.arb.ca.gov/research/aaqs/common-pollutants/vrp/vrp.htm. Accessed January 23, 2019.
[8] California Air Resources Board, Visibility-Reducing Particles and Health.
[9] California Air Resources Board, Vinyl Chloride & Health, https://ww2.arb.ca.gov/resources/vinyl-chloride-and-health. Accessed May 2021.

vinyl chloride in the air include central nervous system effects, such as dizziness, drowsiness, and headaches while long-term exposure to vinyl chloride through inhalation and oral exposure causes liver damage and has been shown to increase the risk of angiosarcoma, a rare form of liver cancer in humans.[10] Most health data on vinyl chloride relate to carcinogenicity; thus, the people most at risk are those who have long-term exposure to elevated levels, which is more likely to occur in occupational or industrial settings; however, control methodologies applied to industrial facilities generally prevent emissions to the ambient air.[11]

Volatile Organic Compounds (VOCs) and Toxic Air Contaminants (TACs)

Although the SCAQMD's primary mandate is attaining the NAAQS and the CAAQS for criteria pollutants within the district, SCAQMD also has a general responsibility to control emissions of air contaminants and prevent endangerment to public health. As a result, the SCAQMD has regulated pollutants other than criteria pollutants such as VOCs, TACs, greenhouse gases, and stratospheric ozone-depleting compounds.

VOCs

VOCs are organic chemical compounds of carbon and are not "criteria" pollutants themselves; however, VOCs are a prime component (along with NO_X) of the photochemical processes by which such criteria pollutants as O_3, nitrogen dioxide, and certain fine particles are formed. They are therefore regulated as "precursors" to formation of these criteria pollutants. Some are also identified as TACs and have adverse health effects. VOCs are typically formed from combustion of fuels and/or released through evaporation of organic liquids, internal combustion associated with motor vehicle usage, and consumer products (e.g., architectural coatings, etc.).

Toxic Air Contaminants

TACs is a term used to describe airborne pollutants that may be expected to result in an increase in mortality or serious illness or which may pose a present or potential hazard to human health, and include both carcinogens and non-carcinogens. The California Air Resources Board (CARB) and the California Office of Environmental Health Hazard Assessment (OEHHA) determine if a substance should be formally identified, or "listed," as a TAC in California. CARB has listed approximately 200 toxic substances, including those identified by the USEPA, which are identified on the California Air Toxics Program's TAC List. TACs are also not classified as "criteria" air pollutants. The greatest potential for TAC emissions during construction is related to diesel particulate matter (DPM) emissions associated with heavy-duty equipment. During long-term operations, sources of DPM may include heavy duty diesel-fueled delivery trucks and stationary emergency generators. The effects of TACs can be diverse and their health impacts

[10] California Air Resources Board, Vinyl Chloride & Health.
[11] California Air Resources Board, Vinyl Chloride & Health.

tend to be local rather than regional; consequently, ambient air quality standards for these pollutants have not been established, and analysis of health effects is instead based on cancer risk and exposure levels.

Sensitive Receptors

There is a strong connection between health risk and the proximity of the source of air pollution. Local jurisdictions have the responsibility for determining land use compatibility for sensitive receptors. A sensitive receptor is a person in the population who is particularly susceptible to health effects due to exposure to an air contaminant. Some land uses are considered more sensitive to changes in air quality than others, depending on the population groups and the activities involved. CARB has identified the following population groups that are most likely affected by air pollution: children less than 14 years of age, adults over 65 years of age, athletes, and people with cardiovascular and chronic respiratory diseases. Land uses where these population groups are likely to spend a substantial amount of time are considered sensitive receptors. According to AQMD, land uses with sensitive receptors include the following (SCAQMD 2005):

- Schools, playgrounds and childcare centers
- Long-term health care facilities
- Rehabilitation centers
- Convalescent centers
- Hospitals
- Retirement homes
- Residences

Existing Conditions

Ambient 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. SCAB 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 in both the SCAB generally, and specifically the Los Angeles County portion of the SCAB. Area-wide sources generate the most airborne particulates (i.e., PM_{10} and $PM_{2.5}$) in both the SCAB generally, and specifically the Los Angeles County portion of the SCAB. The attainment status for the Los Angeles County portion of the SCAB with regard to federal and State ambient air quality standards are shown in Table 4.2-2.

Table 4.2-2 Attainment Status for the SCAB

Pollutant	California	Federal
Ozone (1-Hour)	Nonattainment	Nonattainment (Extreme)
Ozone (8-Hour)	Nonattainment	Pending – Expect Nonattainment (Extreme)
Carbon Monoxide (1-Hour and 8-Hour)	Attainment	Attainment (Maintenance)
Nitrogen Dioxide (1-Hour)	Attainment	Unclassified/Attainment
Nitrogen Dioxide (8-Hour)	Attainment	Attainment (Maintenance)
Sulfur Dioxide (1-Hour)	Attainment	Pending – Expect Unclassified/Attainment
Sulfur Dioxide (24-Hour)	Attainment	Unclassified/Attainment
$PM_{2.5}$ (24-Hour)	Nonattainment	Attainment (Maintenance)
$PM_{2.5}$ (Annual)	Nonattainment	n/a
PM_{10} (24-Hour)	n/a	Nonattainment (Serious)
PM_{10} (Annual)	Nonattainment	Nonattainment (Moderate)
Lead	Attainment	Nonattainment (Partial)
Source: SCAQMD 2016		

The South Coast Air Quality Management District (SCAQMD) divides SCAB into 38 source receptor areas (SRAs), wherein 38 monitoring stations operate to monitor the various concentrations of air pollutants in the region. The City of Los Angeles includes areas located in SRA 1, SRA 2, SRA 3, SRA 4, SRA 7, and SRA 12. For these SRAs, Table 4.2-3 through Table 4.2-8 identify the federal and state ambient air quality standards for relevant air pollutants, along with ambient pollutant concentrations that were measured at each station between 2017 and 2019, the most current data available.

According to air quality data shown in Table 4.2-3 through Table 4.2-8, ozone concentrations exceeded the national 1-hour standard for zero to 26 days per year between 2017 and 2019 across the monitoring stations. Ozone concentrations also exceeded the national and State 8-hour standards for zero to 64 days per year between 2017 and 2019 across the monitoring stations. PM_{10} concentrations did not exceed the national 24-hour standard between 2017 and 2019; however, concentrations exceeded the State 24-hour standard for zero to 40 days per year during the same time period across the monitoring stations that measure PM_{10}. $PM_{2.5}$ concentrations exceeded the national 24-hour standard for zero to six days per year between 2017 and 2019 at the two stations that monitor $PM_{2.5}$. Concentrations of NO_2 did not exceed national or State standards between 2017 and 2019.

Table 4.2-3 Summary of Ambient Air Quality in SRA 1

Air Pollutants Monitored at the Los Angeles-North Main Street Monitoring Station	Year		
	2017	2018	2019
Ozone (O_3)			
Maximum 1-hour concentration measured	0.116 ppm	0.098 ppm	0.093 ppm
Number of days exceeding State 0.07 ppm 1-hour standard	6	2	0
Maximum 8-hour concentration measured	0.086 ppm	0.073 ppm	0.080 ppm
Number of days exceeding National or State 0.07 ppm 8-hour standard	14	4	2
Nitrogen Dioxide (NO_2)			
Maximum 1-hour concentration measured	80.6 ppb	70.1 ppb	69.7 ppb
Number of days exceeding State 180 ppb 1-hour standard	0	0	0
Annual Average	20 ppb	18 ppb	18 ppb
Does measured annual average exceed National 100 ppb annual average standard?	No	No	No
Does measured annual average exceed State 30 ppb annual average standard?	No	No	No
Suspended Particulates (PM_{10})			
Maximum 24-hour concentration measured	96.2 µg/m^3	81.2 µg/m^3	93.9 µg/m^3
Number of days exceeding National 150 µg/m3 24-hour standard	0	0	0
Number of days exceed State 50 µg/m3 24-hour standard	40	31	15
Annual Arithmetic Mean (AAM)	n/a	34.0 µg/m^3	34.0 µg/m^3
Does measured AAM exceed National 150 µg/m^3 AAM standard?	n/a	No	No
Does measured AAM exceed State 20 µg/m^3 AAM standard?	n/a	Yes	Yes
Fine Particulates ($PM_{2.5}$)			
Maximum 24-hour concentration measured	61.7 µg/m^3	65.3 µg/m^3	43.5 µg/m^3
Number of days exceeding National 35.0 µg/m^3 24-hour standard	6	6	1
Annual Arithmetic Mean (AAM)	16.3 µg/m^3	16.0 µg/m^3	10.8 µg/m^3
Does measured AAM exceed National 15 µg/m^3 AAM standard?	Yes	Yes	No
Does measured AAM exceed State 12 µg/m^3 AAM standard?	Yes	Yes	No

ppm = parts per million;
ppb = parts per billion;
µg/m^3 = micrograms per cubic meter;
n/a = data not available or not collected by the District.
Source: CARB 2021

Table 4.2-4 Summary of Ambient Air Quality in SRA 2

Air Pollutants Monitored at the West Los Angeles-VA Hospital Monitoring Station	Year		
	2017	2018	2019
Ozone (O_3)			
Maximum 1-hour concentration measured	0.099 ppm	0.094 ppm	0.086 ppm
Number of days exceeding State 0.09 ppm 1-hour standard	1	0	0
Maximum 8-hour concentration measured	0.077 ppm	0.073 ppm	0.075 ppm
Number of days exceeding National or State 0.07 ppm 8-hour standard	3	2	1
Nitrogen Dioxide (NO_2)			
Maximum 1-hour concentration measured	55.7 ppb	64.7 ppb	48.8 ppb
Number of days exceeding State 180 ppb 1-hour standard	0	0	0
Annual Average	11 ppb	11 ppb	n/a
Does measured annual average exceed National 100 ppb annual average standard?	No	No	No
Does measured annual average exceed State 30 ppb annual average standard?	No	No	No

ppm = parts per million;
ppb = parts per billion;
Source: CARB 2021

Table 4.2-5 Summary of Ambient Air Quality in SRA 3

Air Pollutants Monitored at the Los Angeles-Westchester Parkway	Year		
	2017	2018	2019
Ozone (O_3)			
Maximum 1-hour concentration measured	0.086 ppm	0.074 ppm	0.082 ppm
Number of days exceeding State 0.09 ppm 1-hour standard	0	0	0
Maximum 8-hour concentration measured	0.070 ppm	0.065 ppm	0.067 ppm
Number of days exceeding National or State 0.07 ppm 8-hour standard	0	0	0
Nitrogen Dioxide (NO_2)			
Maximum 1-hour concentration measured	72.2 ppb	59.6 ppb	56.6 ppb
Number of days exceeding State 180 ppb 1-hour standard	0	0	0
Annual Average	n/a	n/a	9 ppb
Does measured annual average exceed National 100 ppb annual average standard?	n/a	n/a	No
Does measured annual average exceed State 30 ppb annual average standard?	n/a	n/a	No
Suspended Particulates (PM_{10})			
Maximum 24-hour concentration measured	46.5 $\mu g/m^3$	45.3 $\mu g/m^3$	62.1 $\mu g/m^3$
Number of days exceeding National 150 $\mu g/m^3$ 24-hour standard	0	0	0
Number of days exceed State 50 $\mu g/m^3$ 24-hour standard	0	0	2
Annual Arithmetic Mean (AAM)	20.2 $\mu g/m^3$	n/a	19.5 $\mu g/m^3$
Does measured AAM exceed National 150 $\mu g/m^3$ AAM standard?	No	n/a	No
Does measured AAM exceed State 20 $\mu g/m^3$ AAM standard?	No	n/a	Yes

ppm = parts per million;
ppb = parts per billion;
$\mu g/m^3$ = micrograms per cubic meter;
n/a = data not available or not collected by the District.
Source: CARB 2021

Table 4.2-6 Summary of Ambient Air Quality in SRA 4

Air Pollutants Monitored at the Long Beach-2425 Webster Street	Year		
	2017	2018	2019
Ozone (O_3)			
Maximum 1-hour concentration measured	0.082 ppm	0.074 ppm	0.075 ppm
Number of days exceeding State 0.09 ppm 1-hour standard	0	0	0
Maximum 8-hour concentration measured	0.068 ppm	0.063 ppm	0.064 ppm
Number of days exceeding National or State 0.07 ppm 8-hour standard	0	0	0
Nitrogen Dioxide (NO_2)			
Maximum 1-hour concentration measured	89.5 ppb	85.3 ppb	71.8 ppb
Number of days exceeding State 180 ppb 1-hour standard	0	0	0
Annual Average	18 ppb	17 ppb	16 ppb
Does measured annual average exceed National 100 ppb annual average standard?	No	No	No
Does measured annual average exceed State 30 ppb annual average standard?	No	No	No
Suspended Particulates (PM_{10})			
Maximum 24-hour concentration measured	79.0 µg/m^3	83.0 µg/m^3	155.4 µg/m^3
Number of days exceeding National 150 µg/m^3 24-hour standard	0	0	1
Number of days exceed State 50 µg/m^3 24-hour standard	10	4	4
Annual Arithmetic Mean (AAM)	n/a	32.5	29.5
Does measured AAM exceed National 150 µg/m^3 AAM standard?	n/a	No	No
Does measured AAM exceed State 20 µg/m^3 AAM standard?	n/a	Yes	Yes

ppm = parts per million;
ppb = parts per billion;
µg/m^3 = micrograms per cubic meter;
n/a = data not available or not collected by the District.
Source: CARB 2021

Table 4.2-7 Summary of Ambient Air Quality in SRA 7

Air Pollutants Monitored at the 18330 Gault Street, Reseda Monitoring Station[1]	Year		
	2017	2018	2019
Ozone (O_3)			
Maximum 1-hour concentration measured	0.140 ppm	0.120 ppm	0.122 ppm
Number of days exceeding State 0.09 ppm 1-hour standard	26	14	14
Maximum 8-hour concentration measured	0.114 ppm	0.101 ppm	0.094 ppm
Number of days exceeding National or State 0.07 ppm 8-hour standard	64	49	34
Nitrogen Dioxide (NO_2)			
Maximum 1-hour concentration measured	62.5 ppb	57.2 ppb	64.4 ppb
Number of days exceeding State 180 ppb 1-hour standard	0	0	0
Annual Average	12 ppb	12 ppb	10 ppb
Does measured annual average exceed National 100 ppb annual average standard?	No	No	No
Does measured annual average exceed State 30 ppb annual average standard?	No	No	No
Fine Particulates ($PM_{2.5}$)			
Maximum 24-hour concentration measured	61.3 μg/m^3	63.7 μg/m^3	120.9 μg/m^3
Number of days exceeding National 35.0 μg/m^3 24-hour standard	0	1	0
Annual Arithmetic Mean (AAM)	16.8 μg/m^3	15.8 μg/m^3	11.9 μg/m^3
Does measured AAM exceed National 15 μg/m^3 AAM standard?	Yes	Yes	No
Does measured AAM exceed State 12 μg/m^3 AAM standard?	Yes	Yes	No

Notes:
ppm = parts per million;
ppb = parts per billion;
μg/m^3 = micrograms per cubic meter;
n/a = data not available or not collected by the District.
[1] The nearest monitoring station to SRA 7 is the 18330 Gault Street, Reseda Monitoring Station, which is located in SRA-6.
Source: CARB 2021

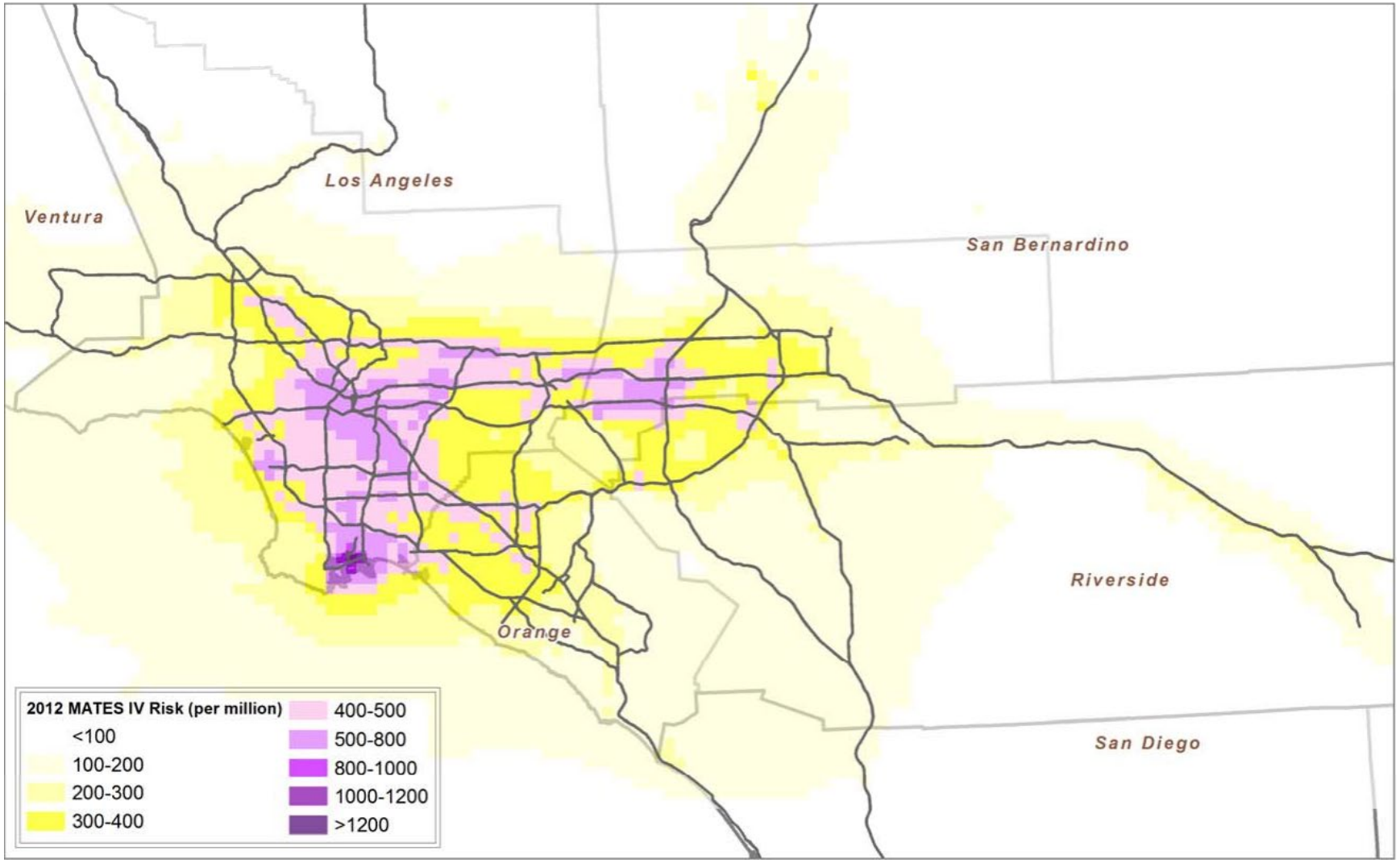
Table 4.2-8 Summary of Ambient Air Quality in SRA 12

Air Pollutants Monitored at the Compton – 700 North Bullis Road Monitoring Station	Year		
	2017	2018	2019
Ozone (O_3)			
Maximum 1-hour concentration measured	0.092 ppm	0.075 ppm	0.100 ppm
Number of days exceeding State 0.09 ppm 1-hour standard	0	0	1
Maximum 8-hour concentration measured	0.076 ppm	0.063 ppm	0.079 ppm
Number of days exceeding National or State 0.07 ppm 8-hour standard	5	0	1
Nitrogen Dioxide (NO_2)			
Maximum 1-hour concentration measured	99.1 ppb	68.3 ppb	70.0 ppb
Number of days exceeding State 180 ppb 1-hour standard	0	0	0
Annual Average	16 ppb	15 ppb	14 ppb
Does measured annual average exceed National 100 ppb annual average standard?	No	No	No
Does measured annual average exceed State 30 ppb annual average standard?	No	No	No
Fine Particulates ($PM_{2.5}$)			
Maximum 24-hour concentration measured	66.7 μg/m^3	49.4 μg/m^3	39.5 μg/m^3
Number of days exceeding National 35.0 μg/m^3 24-hour standard	5	2	1
Annual Arithmetic Mean (AAM)	13.3 μg/m^3	13.3 μg/m^3	10.9 μg/m^3
Does measured AAM exceed National 15 μg/m^3 AAM standard?	No	No	No
Does measured AAM exceed State 12 μg/m^3 AAM standard?	Yes	Yes	No

Notes:
ppm = parts per million;
ppb = parts per billion;
μg/m^3 = micrograms per cubic meter;
n/a = data not available or not collected by the District.
Source: CARB 2021

SCAQMD also operates and maintains an air monitoring network for TACs. The MATES-IV program measured concentrations of more than 30 air pollutants, including both gases and particulates, at ten fixed sites throughout SCAB (SCAQMD 2015). The monitoring study was accompanied by a computer modeling exercise in which the SCAQMD estimated the risk of cancer from breathing toxic air pollution throughout the region based on emissions and weather data. MATES-IV found that the annual average carcinogenic risk in the SCAB declined from 1,194 in a million in 2005 to 418 in a million in 2012. As shown in Figure 4.2-1 from the *MATES-IV Final Report*, the highest carcinogenic risk of about 2,500 in a million was found near the Ports of Los Angeles and Long Beach (SCAQMD 2015). The existing ambient carcinogenic risk near central Los Angeles is slightly over 1,200 in a million. MATES V is currently under development; the draft

Figure 4.2-1 MATES-IV Modeled Air Toxics Risk Estimates



Source: SCAQMD 2015

MATES V Report dated April 30, 2021 was circulated for public review; the public comment period concluded May 31, 2021 (SCAQMD 2021).

4.2.2 REGULATORY FRAMEWORK

Several federal, state, regional, and local plans, regulations, and programs include policies, requirements, and guidelines regarding air quality.

Federal

The Federal Clean Air Act (CAA) was enacted in 1970 and has been amended numerous times in subsequent years, with the most recent amendments occurring in 1990. The CAA is the comprehensive federal law that regulates air emissions in order to protect public health and welfare. The USEPA is responsible for the implementation and enforcement of the CAA, which establishes federal NAAQS, specifies future dates for achieving compliance, and requires the USEPA to designate areas as attainment, nonattainment, or maintenance. The CAA also mandates that each state submit and implement a State Implementation Plan (SIP) for each criteria pollutant for which the state has not achieved the applicable NAAQS. The SIP includes pollution control measures that demonstrate how the standards for those pollutants will be met. The sections of the CAA most applicable to land use development projects include Title I (Nonattainment Provisions) and Title II (Mobile Source Provisions).

Title I requirements are implemented for the purpose of attaining NAAQS for criteria air pollutants. Table 4.2-9 shows the NAAQS currently in effect for each criteria pollutant. SCAB fails to meet national standards for O_3 and $PM_{2.5}$ and, therefore, is considered a federal "non-attainment" area for these pollutants.

Title II pertains to mobile sources, which includes on-road vehicles (e.g. cars, buses, motorcycles) and non-road vehicles (e.g. aircraft, trains, construction equipment). Reformulated gasoline and automobile pollution control devices are examples of the mechanisms the USEPA uses to regulate mobile air emission sources. The provisions of Title II have resulted in tailpipe emission standards for vehicles, which have been strengthened in recent years to improve air quality. For example, the standards for NO_X emissions have been lowered substantially and the specification requirements for cleaner burning gasoline are more stringent.

The NAAQS, and the CAAQS for the California criteria air pollutants (discussed below), have been set at levels considered safe to protect public health, including the health of sensitive populations and to protect public welfare. The Clean Air Act (CAA) was enacted in 1970 and amended in 1977 and 1990 [42 United States Code (USC) 7401] for the purposes of protecting and enhancing the quality of the nation's air

resources to benefit public health, welfare, and productivity. In 1971, to achieve the purposes of Section 109 of the CAA [42 USC 7409], the USEPA developed Ambient Air Quality Standards that represent the maximum levels of background pollution considered safe, with an adequate margin of safety, to protect the public health and welfare. National Ambient Air Quality Standards (NAAQS) have been designated for the following criteria pollutants of primary concern: ozone, CO, NO_2, SO_2, PM_{10}, $PM_{2.5}$, and Pb.

Table 4.2-9 Ambient Air Quality Standards

Air Pollutant	Average Time	State Standard	Federal Standard
Ozone (O_3)	1-Hour	0.09 ppm	-
	8-Hour	0.07 ppm	0.07 ppm
Carbon Monoxide (CO)	1-Hour	20.0 ppm	35.0 ppm
	8-Hour	9.0 ppm	9.0 ppm
Nitrogen Dioxide (NO_2)	1-Hour	180 ppb	100 ppb
Sulfur Dioxide (SO_2)	1-Hour	250 ppb	75 ppb
	24-Hour	40 ppb	140 ppb
Sulfates (SO_4)	24-Hour	25 μg/m^3	-
Fine Particulate Matter ($PM_{2.5}$)	24-Hour	-	35 μg/m^3
	Annual Arithmetic Mean	12 μg/m^3	12 μg/m^3 (Primary) 15 μg/m^3 (Secondary)
Respirable Particulate Matter (PM_{10})	24-Hour	50 μg/m^3	150 μg/m^3
Lead (Pb)	30-Day Average	1.5 μg/m^3	-
	Calendar Quarter	-	1.5 μg/m^3 (for certain areas)
	Rolling 3-Month Average	-	0.15 μg/m^3

ppm = parts per million;
ppb = parts per billion;
μg/m^3 = microgram per cubic meter.
Source: CARB 2016a

Federal Corporate Average Fuel Economy Standards

In response to the *Massachusetts v. Environmental Protection Agency* ruling discussed above, the George W. Bush Administration issued an Executive Order on May 14, 2007, directing the USEPA, the Department of Transportation (DOT), and the Department of Energy (DOE) to establish regulations that reduce emissions from motor vehicles, non-road vehicles, and non-road engines by 2008.

On May 7, 2010, the USEPA and the National Highway Traffic Safety Administration (NHTSA) issued a final rule regulating fuel efficiency and emissions from motor vehicles for cars and light-duty trucks for model years 2012–2016 (USEPA and NHTSA 2010). On May 21, 2010, the President issued a memorandum

to the Secretaries of Transportation and Energy, and the Administrators of the USEPA and the NHTSA calling for the establishment of additional standards regarding fuel efficiency and reduction, clean fuels, and advanced vehicle infrastructure (GPO 2010). In response to this directive, USEPA and NHTSA issued a Supplemental Notice of Intent announcing plans to propose stringent, coordinated federal emissions and fuel economy standards for model year 2017-2025 light-duty vehicles (GPO 2011). The final rule was adopted in October 2012 and NHTSA intends to set standards for model years 2022-2025 in future rule-making (USEPA and NHTSA 2012; NHTSA 2012).

In August 2018, the USEPA and NHTSA issued a proposed ruling to roll back some of the fuel economy and emission standards for medium- and heavy-duty trucks. The new ruling proposed by the USEPA and NHTSA, the Safer Affordable Fuel-Efficient (SAFE) Vehicle Rules, would replace the Corporate Average Fuel Economy (CAFE) standards set for model year 2022-2025 passenger car and light trucks, while the 2021 model year vehicles will maintain the CAFE standards. The ruling is split into two parts.

Part One, "One National Program" (84 Federal Register [FR] 51310), revokes a waiver granted by USEPA to the State of California under Section 209 of the CAA to enforce more stringent emission standards for motor vehicles than those required by USEPA for the explicit purpose of greenhouse gas reduction, and indirectly, criteria air pollutants and ozone precursor emission reduction. This revocation became effective on November 26, 2019, potentially restricting the ability of CARB to enforce more stringent emission standards for new vehicles and set zero emission vehicle mandates in California.

Part Two addresses CAFE standards for passenger cars and light trucks for model years 2021 to 2026. This rulemaking proposes new CAFE standards for model years 2022 through 2026 and would amend existing CAFE standards for model year 2021. The proposal would retain the model year 2020 standards (specifically, the footprint target curves for passenger cars and light trucks) through model year 2026. The proposal addressing CAFE standards was jointly developed by NHTSA and USEPA, with USEPA simultaneously proposing tailpipe emissions standards for the same vehicles covered by the same model years.

USEPA and NTHSA published final rules to amend and establish national emissions and fuel economy standards on April 30, 2020 (Part Two of the SAFE Vehicles Rule) (85 FR 24174). California and 22 other states are currently challenging this new rule in the court system, and it is reasonably foreseeable that the State will be successful in its legal challenges, for the reasons outlined in the State's lawsuit (State of California 2019) and on the CARB website (CARB 2021). Furthermore, on January 20, 2021, President Biden signed an executive order directing the U.S. Government to revise fuel economy standards with the goal of further reducing emissions (White House 2021a). On April 22, 2021, the Biden Administration proposed

to formally roll back portions of the SAFE Rule thereby restoring California's right to enforce more stringent fuel efficiency standards (White House 2021b).

State

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. California Air Resources Board (CARB), a part of the California Environmental Protection Agency (CalEPA), is responsible for the coordination and administration of both state and federal air pollution control programs within California. In this capacity, CARB conducts research, sets the CAAQS, compiles emission inventories, develops suggested control measures, and provides oversight of local programs. CARB establishes emissions standards for motor vehicles sold in California, consumer products, and various types of commercial equipment. It also sets fuel specifications to further reduce vehicular emissions. Table 4.2-9 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 4.2-9, the CAAQS include more stringent standards than the NAAQS. SCAB fails to meet state standards for O_3, PM_{10}, and $PM_{2.5}$ and, therefore, is considered "non-attainment" for these pollutants.

California Code of Regulations

The California Code of Regulations (CCR) is the official compilation and publication of regulations adopted, amended or repealed by state agencies pursuant to the Administrative Procedure Act. 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 five minutes at any location. In addition, Section 93115 in Title 17 of the CCR states that operations of any stationary, diesel-fueled, compression-ignition engines shall meet specified fuel and fuel additive requirements and emissions standards.

State Programs for Toxic Air Contaminants

The California Air Toxics Program is an established 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 Office of Environmental Health Hazard Assessment (OEHHA) determine if a substance should be formally identified, or "listed," as a TAC in California. 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 stationary and mobile sources, including On-Road and Off-Road Vehicle

Rules. These ATCMs include measures such as limits on heavy-duty diesel motor vehicle idling and emission standards for off-road diesel construction equipment in order to reduce public exposure to DPM and other TACs. These actions are also supplemented by the AB 2588 Air Toxics "Hot Spots" program and SB 1731, which require facilities to report their air toxics emissions, assess health risks, notify nearby residents and workers of significant risks if present, and reduce their risk through implementation of a risk management plan. SCAQMD has further adopted two rules to limit cancer and non-cancer health risks from facilities located within its jurisdiction. Rule 1401 (New Source Review of Toxic Air Contaminants) regulates new or modified facilities, and Rule 1402 (Control of Toxic Air Contaminants from Existing Sources) regulates facilities that are already operating. Rule 1402 incorporates requirements of the AB 2588 program, including implementation of risk reduction plans for significant risk facilities.

Diesel Risk Reduction Program

CARB identified particulate emissions from diesel-fueled engines as TACs in August 1998. Following the identification process, the ARB was required by law to determine if there is a need for further control, which moved us into the risk management phase of the program. CARB developed the *Risk Reduction Plan to Reduce Particulate Matter Emissions from Diesel-Fueled Engines* and the *Vehicles and the Risk Management Guidance for the Permitting of New Stationary Diesel-Fueled Engines*. The Diesel Advisory Committee approved these documents on September 28, 2000, paving the way for the next step in the regulatory process: the control measure phase. During the control measure phase, specific statewide regulations designed to further reduce DPM emissions from diesel-fueled engines and vehicles have and continue to be evaluated and developed. The goal of each regulation is to make diesel engines as clean as possible by establishing state-of-the-art technology requirements or emission standards to reduce DPM emissions.

State Implementation Plan

The State Implementation Plan (SIP) is a collection of documents that set forth the State's strategies for achieving the NAAQS. In California, the SIP is a compilation of new and previously submitted plans, programs (such as monitoring, modeling, and permitting), district rules, State regulations, and federal controls. CARB is the lead agency for all purposes related to the SIP under state law. Local air districts and other agencies, such as the Department of Pesticide Regulation and the Bureau of Automotive Repair, prepare SIP elements and submit them to CARB for review and approval. CARB then forwards SIP revisions to the USEPA for approval and publication in the Federal Register. All the items included in the California SIP are listed in the Code of Federal Regulations (CFR) at 40 CFR 52.220.

As the regional air quality management district, the South Coast Air Quality Management District is responsible for preparing and implementing the portion of the SIP applicable to the SCAB. The air pollution

control district for each county adopts rules, regulations, and programs to attain federal and State air quality standards and appropriates money (including permit fees) to achieve these objectives.

California Off-Road Diesel-Fueled Fleet Regulations

The California In-Use Off-Road Diesel-Fueled Fleets Regulations were approved by CARB in July 2007 and subsequent major amendments were incorporated in December 2011. The regulations are intended to reduce DPM and NO_X emissions from in-use off-road heavy--duty diesel vehicles in California. The regulation requires that any operator of diesel--powered off-road vehicles with 25 horsepower or greater engines meet specific fleet average targets. CARB maintains schedules for small, medium, and large equipment fleets that require equipment retrofits or replacements over time to gradually bring the existing equipment up to standard. As of January 2018, all newly purchased equipment for medium and large equipment fleets will be required to meet Tier 3 or higher engine standards (CARB 2016b).

Regional Air Quality Regulations

South Coast Air Quality Management District

The SCAQMD is primarily responsible for planning, implementing, and enforcing air quality standards in the SCAB. SCAB is a subregion within the western portion of the SCAQMD jurisdiction, as the SCAQMD also regulates portions of the Salton Sea Air Basin and Mojave Desert Air Basin within Riverside County.

Air Quality Management Plan and RTP/SCS

To meet the NAAQS and CAAQS, the SCAQMD has adopted a series of Air Quality Management Plans (AQMPs) , which serve as a regional blueprint to develop and implement an emission reduction strategy that will bring the area into attainment with the standards in a timely manner. The 2016 AQMP includes strategies to ensure that rapidly approaching attainment deadlines for O_3 and $PM_{2.5}$ are met and that public health is protected to the maximum extent feasible. The most significant air quality challenge in the SCAB is to reduce NO_X emissions[12] sufficiently to meet the upcoming O_3 standard deadlines, as NO_X plays a critical role in the creation of O_3. The AQMP's strategy to meet the 8-hour O_3 standard in 2023 should lead to sufficient NO_X emission reductions to attain the 1-hour O_3 standard by 2022. Since NO_X emissions also lead to the formation of $PM_{2.5}$, the NO_X reductions needed to meet the O_3 standards will likewise lead to improvement of $PM_{2.5}$ levels and attainment of $PM_{2.5}$ standards.[13] [14]

The SCAQMD's strategy to meet the NAAQS and CAAQS distributes the responsibility for emission reductions across federal, state and local levels and industries. The 2016 AQMP is composed of stationary

[12] NO_X emissions are a precursor to the formation of both O_3 and secondary $PM_{2.5}$.
[13] Estimates are based on the inventory and modeling results and are relative to the baseline emission levels for each attainment year (see Final 2016 AQMP for detailed discussion).
[14] SCAQMD, Final 2016 AQMP, 2017. Page ES-2.

and mobile source emission reductions from traditional regulatory control measures, incentive-based programs, co-benefits from climate programs, mobile source strategies, and reductions from federal sources, which include aircraft, locomotives and ocean-going vessels. These strategies are to be implemented in partnership with the CARB and USEPA.

The AQMP also incorporates the transportation strategy and transportation control measures (TCM) from SCAG's adopted 2016-2040 RTP/SCS (2016-2040 RTP/SCS) Plan[15]. SCAG is the metropolitan planning organization (MPO) and 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. MPOs establish plans under Federal Highway Administration rules for use of federal highway and state transportation funds. Pursuant to California Health and Safety Code Section 40460, SCAG also has the responsibility of preparing and approving the portions of the AQMP relating to the regional demographic projections and integrated regional land use, housing, employment, and transportation programs, measures, and strategies. SCAG is required by law to ensure that transportation activities in its jurisdiction "conform" to, and are supportive of, the goals of regional and state air quality plans to attain the NAAQS. The RTP/SCS includes transportation programs, measures, and strategies generally designed to reduce vehicle miles traveled (VMT), which are contained in the AQMP. The SCAQMD combines its portion of the AQMP with those prepared by SCAG.[16] The RTP/SCS and TCMs, included as Appendix IV-C of the 2016 AQMP for SCAB, are based on SCAG's 2016-2040 RTP/SCS.

The 2016 AQMP forecasts the 2031 emissions inventories ''with growth'' based on SCAG's 2016-2040 RTP/SCS. The region is projected to see a 12 percent growth in population, 16 percent growth in housing units, 23 percent growth in employment, and 8 percent growth in vehicle miles traveled between 2012 and 2031. Despite regional growth in the past, air quality has improved substantially over the years, primarily due to the effects of air quality control programs at the local, state and federal levels[17].

On September 3, 2020, SCAG's Regional Council adopted the 2020-2045 RTP/SCS. The 2020-2045 RTP/SCS was determined to conform to the federally-mandated state implementation plan (SIP), for the attainment and maintenance of NAAQS standards. On October 30, 2020, CARB also accepted SCAG's determination that the SCS met the applicable state greenhouse gas emissions targets. The 2020-2045 RTP/SCS will be incorporated into the forthcoming 2022 AQMP.

[15] SCAG, Final 2016 RTP/SCP, 2016
[16] SCAQMD, Final 2016 AQMP, 2017. Page ES-2.
[17] SCAQMD, Figure 1-4 of the Final 2016 AQMP.

SCAQMD Air Quality Guidance Documents

The SCAQMD published the *CEQA Air Quality Handbook* (approved by the AQMD Governing Board in 1993) to provide local governments with guidance for analyzing and mitigating project-specific air quality impacts.[18] The *CEQA Air Quality Handbook* provides standards, methodologies, and procedures for conducting air quality analyses. However, the SCAQMD is currently in the process of replacing the *CEQA Air Quality Handbook* with the *Air Quality Analysis Guidance Handbook*. While this process is underway, the SCAQMD has provided supplemental guidance on the SCAQMD website[19].

The SCAQMD has also adopted land use planning guidelines in its *Guidance Document for Addressing Air Quality Issues in General Plans and Local Planning*, which considers impacts to sensitive receptors from facilities that emit TAC emissions.[20] SCAQMD's siting distance recommendations are the same as those provided by CARB (e.g., a 500-foot siting distance for sensitive land uses proposed in proximity to freeways and high-traffic roads, and the same siting criteria for distribution centers and dry cleaning facilities). The SCAQMD's document introduces land use-related policies that rely on design and distance parameters to minimize emissions and lower potential health risk. SCAQMDs guidelines are voluntary initiatives recommended for consideration by local planning agencies.

The SCAQMD has published a guidance document called the *Final Localized Significance Threshold Methodology* for CEQA evaluations that is intended to provide guidance when evaluating the localized effects from mass emissions during construction or operation of a project.[21] The SCAQMD adopted additional guidance regarding $PM_{2.5}$ emissions in a document called *Final Methodology to Calculate Particulate Matter (PM)2.5 and $PM_{2.5}$ Significance Thresholds*.[22] The latter document has been incorporated by the SCAQMD into its CEQA significance thresholds and *Final Localized Significance Threshold Methodology*.

SCAQMD Rules and Regulations

The SCAQMD has adopted several rules and regulations to regulate sources of air pollution in the SCAB and to help achieve air quality standards for land use development projects, which include, but are not limited to the following:

18 South Coast Air Quality Management District, CEQA Air Quality Handbook 1993.
19 SCAQMD, Air Quality Analysis Guidance, http://www.aqmd.gov/home/rules-compliance/ceqa/air-quality-analysis-handbook. Accessed July 7, 2021
20 South Coast Air Quality Management District, Guidance Document for Addressing Air Quality Issues in General Plans and Local Planning, 2005,
21 South Coast Air Quality Management District, Final Localized Significance Threshold Methodology, 2008.
22 South Coast Air Quality Management District, Final Methodology to Calculate Particulate Matter (PM2.5) and PM2.5 Significance Thresholds, 2006.

Regulation IV – Prohibitions: This regulation sets forth the restrictions for visible emissions, odor nuisance, fugitive dust, various air emissions, fuel contaminants, start-up/shutdown exemptions and breakdown events. The following is a list of rules are applicable to development projects and uses in the City:

- **Rule 401 – Visible Emissions:** This rule states that a person shall not discharge into the atmosphere from any single source of emission whatsoever any air contaminant for a period or periods aggregating more than three minutes in any one hour which is as dark or darker in shade as that designated No. 1 on the Ringelmann Chart or of such opacity as to obscure an observer's view.
- **Rule 402 – Nuisance:** This rule states that 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 or 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.
- **Rule 403 – Fugitive Dust:** This rule requires projects to prevent, reduce or mitigate fugitive dust emissions from a site. Rule 403 restricts visible fugitive dust to the project property line, restricts the net PM_{10} emissions to less than 50 micrograms per cubic meter (μg/m3) and restricts the tracking out of bulk materials onto public roads. Additionally, projects must utilize one or more of the best available control measures (identified in the tables within the rule). Mitigation measures may include adding freeboard to haul vehicles, covering loose material on haul vehicles, watering, using chemical stabilizers and/or ceasing all activities. Finally, a contingency plan may be required if so determined by the USEPA.

Regulation XI – Source Specific Standards: Regulation XI sets emissions standards for specific sources. The following is a list of rules which may apply to the Project:

- **Rule 1113 – Architectural Coatings:** This rule requires manufacturers, distributors, and end users of architectural and industrial maintenance coatings to reduce VOC emissions from the use of these coatings, primarily by placing limits on the VOC content of various coating categories.
- **Rule 1138 – Control of Emissions from Restaurant Operations:** This rule specifies PM and VOC emissions and odor control requirements for commercial cooking operations that use chain-driven charbroilers to cook meat.
- **Rule 1146.2 – Emissions of Oxides of Nitrogen from Large Water Heaters and Small Boilers and Process Heaters:** This rule requires manufacturers, distributors, retailers, refurbishers, installers, and operators of new and existing units to reduce NOX emissions from natural gas-fired water heaters, boilers, and process heaters as defined in this rule.

- **Rule 1186 – PM10 Emissions from Paved and Unpaved Roads, and Livestock Operations:** This rule applies to owners and operators of paved and unpaved roads and livestock operations. The rule is intended to reduce PM_{10} emissions by requiring the cleanup of material deposited onto paved roads, use of certified street sweeping equipment, and treatment of high-use unpaved roads (see also Rule 403).

Regulation XIII – New Source Review (NSR): Regulation XIII sets requirements for preconstruction review required under both federal and state statutes for new and modified sources located in areas that do not meet the Clean Air Act standards ("non-attainment" areas). NSR applies to both individual permits and entire facilities. Any permit that has a net increase in emissions is required to apply Best Available Control Technology (BACT). Facilities with a net increase in emissions are required to offset the emission increase by use of Emission Reduction Credits (ERCs). The regulation provides for the application, eligibility, registration, use and transfer of ERCs. For low emitting facilities, the SCAQMD maintains an internal bank that can be used to provide the required offsets. In addition, certain facilities are subject to provisions that require public notice and modeling analysis to determine the downwind impact prior to permit issuance.

Regulation XIV – Toxics and Other Non-Criteria Pollutants: Regulation XIV sets requirements for new permit units, relocations, or modifications to existing permit units which emit toxic air contaminants or other non-criteria pollutants. The following is a list of rules which may apply to housing development accommodated by the Housing Element Update:

- **Rule 1403 – Asbestos Emissions from Demolition/Renovation Activities:** This rule 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.
- **Rule 1470 – Requirements for Stationary Diesel-Fueled Internal Combustion and Other Compression Ignition Engines:** This rule applies to stationary compression ignition (CI) engines greater than 50 brake horsepower and sets limits on emissions and operating hours. In general, new stationary emergency standby diesel-fueled engines greater than 50 brake horsepower are not permitted to operate more than 50 hours per year for maintenance and testing.

Local

City of Los Angeles General Plan

Local jurisdictions, such as the City, have the authority and responsibility to reduce air pollution through their land use decision-making authority. Specifically, the City is responsible for the assessment and mitigation of air emissions resulting from its land use decisions. In general, the City of Los Angeles' General Plan (including the Framework, Air Quality, Mobility 2035, and Health and Wellness Elements) and the City of Los Angeles' Green New Deal (Sustainable pLAn 2019) contain policies and programs for the protection of the environment and health through improved air quality. These serve to provide additional critical guidance for the betterment of public health for the region and City.

The most directly-related of those plans, the City's General Plan Air Quality Element, was adopted on November 24, 1992, and sets forth the goals, objectives, and policies which guide the City in its implementation of its air quality improvement programs and strategies. A number of these goals, objectives, and policies are relevant to land use development, and relate to traffic mobility, minimizing particulate emissions from construction activities, discouraging single-occupancy vehicle trips, managing traffic congestion during peak hours, and increasing energy efficiency in City facilities and private developments.

The Air Quality Element establishes six goals:

- Good air quality in an environment of continued population growth and healthy economic structure;
- Less reliance on single-occupant vehicles with fewer commute and non-work trips;
- Efficient management of transportation facilities and system infrastructure using cost-effective system management and innovative demand-management techniques;
- Minimal impacts of existing land use patterns and future land use development on air quality by addressing the relationship between land use, transportation and air quality;
- Energy efficiency through land use and transportation planning, the use of renewable resources and less-polluting fuels and the implementation of conservation measures including passive measures such as site orientation and tree planting; and
- Citizen awareness of the linkages between personal behavior and air pollution and participation in efforts to reduce air pollution

The City is also responsible for the implementation of TCMs as outlined in the AQMP. Through capital improvement programs, the City can fund infrastructure that contributes to improved air quality by requiring such improvements as bus turnouts as appropriate, installation of energy-efficient streetlights,

and synchronization of traffic signals. In accordance with CEQA requirements and the CEQA review process, the City assesses the air quality impacts of new development projects, requires mitigation of potentially significant air quality impacts by conditioning discretionary permits, and monitors and enforces implementation of such mitigation measures.

Plan for a Healthy Los Angeles

The *Plan for a Healthy Los Angeles*, adopted by the City Council on March 31, 2015, lays the foundation to create healthier communities for all residents in the City. As an element of the General Plan, it provides high-level policy vision, along with measurable objectives and implementation programs, to elevate health as a priority for the City's future growth and development. With a focus on public health and safety, the *Plan for a Healthy Los Angeles* provides a roadmap for addressing the most basic and essential quality-of-life issues: safe neighborhoods, a clean environment (i.e., improved ambient and indoor air quality), the opportunity to thrive, and access to health services, affordable housing, and healthy and sustainably produced food.

4.2.3 ENVIRONMENTAL IMPACTS

Thresholds of Significance

In accordance with Appendix G of the CEQA Guidelines, the Proposed Project's air quality impacts would be significant if the Housing Element Update would:

- **Threshold 4.2-1**: Conflict with or obstruct implementation of the applicable air quality plan
- **Threshold 4.2-2:** Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard
- **Threshold 4.2-3:** Expose sensitive receptors to substantial pollutant concentrations

Specific quantitative thresholds used to define the general CEQA thresholds are discussed below.

SCAQMD Regional and Local Significance Thresholds

SCAQMD has developed specific CEQA regional and localized significance thresholds (LSTs) to assess air quality impacts associated with individual development projects. The regional thresholds apply throughout the City, while LSTs vary depending on the SRA in which a development project is located. The regional construction and operation significance thresholds for individual projects in SCAB are shown in Table 4.2-10.

Table 4.2-10 SCAQMD Regional Significance Thresholds

Construction Thresholds	Operational Thresholds
75 pounds per day of ROG 100 pounds per day of NO_X 550 pounds per day of CO 150 pounds per day of SO_X 150 pounds per day of PM_{10} 55 pounds per day of $PM_{2.5}$	55 pounds per day of ROG 55 pounds per day of NO_X 550 pounds per day of CO 150 pounds per day of SO_X 150 pounds per day of PM_{10} 55 pounds per day of $PM_{2.5}$
Source: SCAQMD 2019	

LSTs were developed in response to the Governing Board's Environmental Justice Enhancement Initiative (1-4) and address concerns regarding exposure of individuals to criteria pollutants in local communities. LSTs have been developed for NO_2, CO, PM_{10}, and $PM_{2.5}$. LSTs represent the maximum emissions from a project that will not cause or contribute to an air quality exceedance of NAAQS or CAAQS at the nearest sensitive receptor, taking into consideration ambient concentrations in each SRA, distance to the sensitive receptor, and project size. LSTs have been developed for emissions within construction areas up to five acres in size.

The following SRAs are located in the City: SRA 1, SRA 2, SRA 3, SRA 4, SRA 7, and SRA 12. SCAQMD sets LST values for construction and operation of projects with lot sizes from less than one acre up to five acres and at a distance of 25 meters to 500 meters (SCAQMD 2008). LSTs only apply to on-site emissions and do not apply to mobile sources, such as cars on a roadway (SCAQMD 2008). The majority of operational emissions from residential uses are associated with project-generated vehicle trips, rather than stationary sources (SCAQMD 2008); on-site sources potentially associated with residential uses include natural gas fueled fireplaces[23], stoves, water heaters, space heaters, landscape equipment, consumer products, and architectural coatings. These types of on-site sources do not typically generate significant emissions with potential to exceed LSTs. As such, LSTs for development accommodated under the Housing Element Update would only apply to construction emissions. Table 4.2-11 presents the LST values for construction within 25 meters (82 feet) of sensitive receptors, the most conservative thresholds.

[23] SCAQMD Rule 445 prohibits installation of wood burning fireplaces in new residential or commercial development. Natural gas fueled fireplaces generate substantially lesser emissions than wood burning fireplaces.

Table 4.2-11 SCAQMD LSTs for Construction Within 25 Meters of Sensitive Receptors

Pollutant	Allowable Emissions (lbs/day)		
	1-Acre Site or less	2-Acre Site	5-Acre Site
SRA 1			
NO_X	74	108	161
CO	680	1,048	1,861
PM_{10}	5	8	16
$PM_{2.5}$	3	5	8
SRA 2			
NO_X	103	147	221
CO	562	827	1,531
PM_{10}	4	6	13
$PM_{2.5}$	3	4	6
SRA 3			
NO_X	91	131	197
CO	664	967	1,796
PM_{10}	5	8	15
$PM_{2.5}$	3	5	8
SRA 4			
NO_X	57	82	123
CO	585	842	1,530
PM_{10}	4	7	14
$PM_{2.5}$	3	5	8
SRA 7			
NO_X	80	114	172
CO	498	786	1,434
PM_{10}	4	7	14
$PM_{2.5}$	3	4	8
SRA 12			
NO_X	46	65	98
CO	231	346	630
PM_{10}	4	7	13
$PM_{2.5}$	3	4	7
Source: SCAQMD 2009			

The SCAQMD is also tasked with managing exposure of sensitive receptors to air toxics and health risk. According to SCAQMD methodology, health effects from carcinogenic air toxics are described in terms of individual cancer risk. "Individual Cancer Risk" is the likelihood that a person continuously exposed to concentrations of TACs over a 70-year lifetime will contract cancer based on the use of standard risk assessment methodology. Consistent with California Proposition 65, the SCAQMD has stated that the incremental cancer risk should not exceed 10 persons in one million, and the chronic and acute risks should not exceed a calculated Hazard Index value of 1.0. (SCAQMD 2015).

To provide a perspective on risk, the American Cancer Society (2018) reports that in the United States, men have about a 40 in 100 chance (0.40 probability) and women have about a 38 in 100 chance (0.38) of developing cancer during a lifetime. Based on this background cancer risk level in the general population, the excess cancer risk threshold means that the contribution from a toxic hazard should not cause the resultant cancer risk for the exposed population to exceed 400,001 in a million for men or 380,001 for women. The SCAQMD quantitative thresholds are considered when making a significance determination based on the State CEQA Guidelines Appendix G thresholds, above, as appropriate.

Methodology

The terminology and methodology used to evaluate the significance of potential impacts to air quality are described below. In accordance with CEQA requirements and the CEQA review process, the City assesses the air quality impacts of new development projects, requires mitigation of potentially significant air quality impacts by conditioning discretionary permits, and monitors and enforces implementation of such mitigation. The City uses SCAQMD's *CEQA Air Quality Handbook* (1993) as the guidance document for the environmental review of plans and development proposals within its jurisdiction. The City does not, however, have the specific technical expertise to develop plans, programs, procedures, and methodologies to ensure that air quality will meet federal and State standards. Instead, the City relies upon the expertise of the SCAQMD, uses the *CEQA Air Quality Handbook*, and SCAQMD recommended thresholds of significance as the guidance for the environmental review of plans and development proposals. For purposes of this analysis, the CEQA Guidelines Appendix G criteria are used, supplemented by the thresholds identified in current SCAQMD guidance.

Construction

At a given time development accommodated under the Housing Element Update may include concurrent construction of anywhere between a handful or several thousand individual projects. Therefore, it is not feasible to estimate construction emissions from housing development accommodated under the Housing Element Update and adoption of the Rezoning Program. As such, this construction analysis focuses on quantifying the size of individual projects which may exceed significance thresholds established by

SCAQMD and establishing appropriate triggers for subsequent analysis to identify and mitigate potential air quality impacts. This analysis is also further informed by review of air quality analysis of previous projects in the city, to determine the likelihood of air quality impacts and most appropriate project-level mitigation.

Construction emissions were estimated for equipment exhaust emissions and truck trips for a number of example individual construction projects using SCAQMD's California Emissions Estimator Model (CalEEMod), version 2016.3.2. Equipment emission factors in CalEEMod are based on CARB data. Equipment was assumed to operate for eight hours per day. Truck emission factors in CalEEMod are from EMFAC2014 and trucks were assumed to travel 40 miles per day, with a one-way distance of 20 miles to the disposal site. Fugitive dust and architectural coating emissions are qualitatively discussed because it would be speculative to quantify lot acreage and the size of buildings to be coated. These example projects account for four scales of intensity with respect to equipment usage and truck trips, as itemized below.

- Two (2) pieces of heavy-duty equipment and 25 truck trips per day
- Four (4) pieces of heavy-duty equipment and 50 truck trips per day
- Eight (8) pieces of heavy-duty equipment and 100 truck trips per day
- Ten (10) pieces of heavy-duty equipment and 150 truck trips per day

These equipment inventories and truck volumes are representative of a reasonable range of construction activity intensity for individual projects based on previous development in Los Angeles. Maximum daily regional and localized emissions were quantified for these construction scenarios and assessed in the context of the SCAQMD significance thresholds. The analysis of construction projects from housing development accommodated under the Housing Element Update and adoption of the Rezoning Program assumes a baseline of zero for daily criteria pollutant emissions, which is extremely conservative given that there are generally multiple large and small construction projects going on in the city at any given time.

Mobile Sources

Mobile source emissions were estimated using vehicle activity data presented in Section 4.14, *Transportation*, and vehicle emission rates from CARB's EMFAC2017 model. As shown in Table 4.2-12, buildout of the existing land use designations would gradually increase vehicle trips and vehicle miles traveled (VMT), however per capita and per service population VMT and trips would each diminish due to reduced average trip lengths. The Housing Element Update would result in a slight reduction in per capita VMT, although overall vehicle trips and VMT would increase when compared to the existing baseline due to the forecast population increase relying on SCAG's 2020-2045 RTP/SCS growth forecasts.

Table 4.2-12 Vehicle Activity Data for the Housing Element Update

Activity	Existing (2020)	Baseline (2029)	With Project (2029)	Project vs. Baseline (2029)
Vehicle Trips	17,547,267	18,548,326	18,418,177	-130,149 (-0.7%)
Vehicle Miles Traveled (VMT)	133,113,557	139,381,030	138,345,651	-1,035,379 (-0.7%)
VMT per capita	8.86	8.56	8.50	-0.06 (-0.7%)
VMT per Employment	12.19	11.21	11.12	-0.09 (-0.8%)
Source: Fehr & Peers 2021				

Other Operational Emission Sources

Energy emissions resulting from natural gas combustion and area source emissions related to hearths, landscaping equipment, consumer products, and architectural coatings were calculated according to the methodology explained in Appendix A, *Calculation Details for CalEEMod*, of the User's Guide for CalEEMod.

Regulatory Compliance Measures

As discussed in the Regulatory Setting, there are numerous regulations adopted for the protection of air quality. Among others, housing development accommodated under the Housing Element Update would be required to comply with the following RCMs:

- **RCM-AQ-1 (Demolition, Grading and Construction Activities):** The project shall comply with all applicable standards of the Southern California Air Quality Management District, including the following provisions of District Rule 403:
  - 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 and meet SCAQMD District Rule 403. Wetting could reduce fugitive dust by as much as 50 percent.
  - The construction area shall be kept sufficiently dampened to control dust caused by grading and hauling, and at all times provide reasonable control of dust caused by wind.
  - All clearing, earth moving, or excavation activities shall be discontinued during periods of high winds (i.e., greater than 15 mph), so as to prevent excessive amounts of dust.
  - All dirt/soil loads shall be secured by trimming, watering or other appropriate means to prevent spillage and dust.
  - All dirt/soil materials transported off-site shall be either sufficiently watered or securely covered to prevent excessive amount of dust.

- General contractors shall maintain and operate construction equipment so as to minimize exhaust emissions.
- Trucks having no current hauling activity shall not idle but be turned off.
- Vehicle speeds shall be limited to 15 mph on unpaved roads.

- **RCM-AQ-2 (Construction Equipment Fleet Regulations) :** In accordance with California Off-Road Diesel-Fueled Fleet Regulations, equipment operators shall be registered using the Diesel Off-Road Online Reporting System (DOORS) and diesel-powered construction equipment with 25 horsepower or greater engines shall meet exhaust PM and NO_x emissions standards.
- **RCM-AQ-3 (Idling of Diesel-fueled Commercial Vehicles):** In accordance with Sections 2485 in Title 13 of the California Code of Regulations, the idling of all diesel-fueled commercial vehicles (weighing over 10,000 pounds) shall be limited to five minutes at any location.
- **RCM-AQ-4 (Operation of Diesel-fueled Commercial Vehicles):** In accordance with Section 93115 in Title 17 of the California Code of Regulations, operation of any stationary, diesel-fueled, compression-ignition engines shall meet specified fuel and fuel additive requirements and emission standards.
- **RCM-AQ-5 (Architectural Coatings):** The project shall comply SCAQMD Rule 1113 limiting the volatile organic compound content of architectural coatings.
- **RCM-AQ-6 (Adhesive and Sealant Applications):** Compliance with provisions of the SCAQMD Rule 1168. Projects shall comply with SCAQMD Rule 1168 limiting the VOC content of adhesives, sealants, adhesive primers, and sealant primers.
- **RCM-AQ-7 (Emission Control Measures):** New on-site facility nitrogen oxide emissions shall be minimized through the use of emission control measures (e.g., use of best available control technology for new combustion sources such as boilers and water heaters) as required by SCAQMD Regulation XIII, New Source Review.

Project Impacts and Mitigation Measures

Threshold 4.2-1	Would the Housing Element Update conflict with or obstruct implementation of the applicable air quality plan?

Impact 4.2-1 The Housing Element Update does not encourage or promote growth beyond the SCAG forecasts of regional growth, therefore the Housing Element Update would not conflict with the growth assumptions used in the development of the AQMP. The Housing Element Update would include policies that support reduced air pollutant emissions by promoting sustainable transportation and land use design features and would not conflict with implementation of Transportation Control Measures from the AQMP. Thus, impacts would be ***less than significant***.

As discussed in *Federal and State Air Quality Regulations*, SCAB is designated a nonattainment area for the federal and state one-hour and eight-hour ozone standards, the state PM_{10} standards, and the federal and state annual $PM_{2.5}$ standard. The SCAQMD adopted its latest AQMP, the 2016 AQMP, on March 3, 2017.

A project may be inconsistent with the AQMP if it would generate substantial population, housing, or employment growth that exceeds forecasts used in the development of the AQMP or if the project is inconsistent with applicable AQMP control measures. The 2016 AQMP, the most recent AQMP adopted by the SCAQMD, incorporates local general plans and the SCAG 2016-2040 RTP/SCS socioeconomic forecast projections of regional population, housing and employment growth.[24] The upcoming 2022 AQMP will incorporate socioeconomic forecast projections of regional population, housing and employment growth from the recently adopted 2020-2045 RTP/SCS (titled Connect SoCal).

Operation of housing development accommodated under the Housing Element Update would generate criteria air pollutant emissions associated with area sources (e.g., fireplaces, architectural coatings, consumer products, and landscaping equipment), energy sources (i.e., use of natural gas for space and water heating and cooking), and mobile sources (i.e., vehicle trips to and from the project site). Emissions associated with development, depending on project type and size, could exceed project-specific thresholds established by the SCAQMD, as shown in Table 4.2-14 in *Methodology and Significance Thresholds*. Such projects will be required to undergo independent, project-level CEQA review and include mitigation measures, if necessary, to address potentially significant impacts. This would generally reduce air pollutant emissions for most projects, although not all, to a less than significant level under project thresholds. However, that would not necessarily prevent a conflict with the AQMP, which plans for and is intended to

[24] On September 3, 2020, SCAG's Regional Council formally adopted the 2020-2045 RTP/SCS (titled *Connect SoCal*). However, the 2016 AQMP was adopted prior to this date and relies on the demographic and growth forecasts of the 2016-2040 RTP/SCS.

meet targets for the entire basin based on cumulative forecasted growth. Therefore, the following analysis focuses on the consistency of the Housing Element Update with the growth and emissions forecasts upon which the AQMP is based and with applicable AQMP control measures.

Consistency with AQMP Growth Forecasts

Consistent with State housing element law, the purpose of the Housing Element Update is to accommodate the development of adequate housing to meet housing needs associated with most recent SCAG forecasts of regional growth. The Housing Element Update does not encourage or promote growth beyond the existing growth forecasts. Therefore, although the Housing Element Update would result in the development of 420,327 housing units, this increase in housing is consistent with SCAG forecasts of regional growth and the Housing Element Update would not conflict with the growth assumptions used in the development of the AQMP.[25]

Consistency with AQMP Control Measures

Consistency with the 2016 AQMP is also a function of consistency with applicable AQMP control measures. The AQMP includes specific control measures to reduce air pollutant emissions in order to meet federal and State air quality standards. One of the most important methods the AQMP relies on to achieve its goals is the use of TCMs. TCMs are defined in the 2016 AQMP as "measures for the purpose of reducing emissions or concentrations of air pollutants from transportation sources by reducing vehicle use or changing traffic flow or congestion conditions." The TCMs included in the 2016 AQMP are described in SCAG's Final 2016 RTP/SCS. TCMs for the City of Los Angeles are listed in AQMP Attachment A and include various traffic calming, pedestrian enhancements, bicycle paths, commuter service expansions, intelligent transportation system upgrades (LA0G1128, LA0G1165, LA0G182 LA0G901, LAF1524, LAF1612, LAF1708 LAF3171 LAF3314, LAF3315, LAF3513, LAF3515, LAF3646, LAF3731, LAF5518, LAF5525, LAF5620, and LAF7707). These TCMs were scheduled for initiation and completed between 2016 and 2019.

The Housing Element Update would not conflict with implementation of TCMs from the AQMP, or otherwise lessen emissions reductions associated with these measures. Additionally, the following policies in the Housing Element Update would help reduce air pollutant emissions through promoting transportation and land use design factors such as intensification, pedestrian-centered development, and

25 As compared to growth forecasts from the 2016-2040 RTP/SCS, growth forecasts from the 2020-2045 RTP/SCS assume a lesser rate of population and housing growth in the city. The 2016-2040 RTP/SCS forecasts population will increase to 118,700 persons and 48,400 households in 2040; the 2020-2045 RTP/SCS forecasts population will only increase to 115,430 persons and 48,64048,400 households in 2045.

reuse of already developed lands in proximity to transit and commercial areas, that would result in VMT reductions:

Policy 1.1.6: Allocate citywide housing targets across Community Plan areas in a way that seeks to address patters of racial and economic segregation, promote jobs/housing balance, provide ample housing opportunities, and affirmatively further fair housing.

Policy 1.3.1: Prioritize housing capacity, resources, policies and incentives to include Affordable Housing in residential development, particularly near transit, jobs, and in Higher Opportunity Areas.

Policy 3.1.5: Develop and implement environmentally sustainable urban design standards and pedestrian centered improvements in development of a project and within the public and private realm such as shade trees, parkways and comfortable sidewalks.

Objective 3.2: Promote environmentally sustainable buildings and land use patterns that support a mix of uses, housing for various income levels and provide access to jobs, amenities, services and transportation options.

Policy 3.2.2: Promote new multi-family housing, particularly Affordable and mixed income housing, in areas near transit, jobs and Higher Opportunity Areas, in order to facilitate a better jobs-housing balance, help shorten commutes, and reduce greenhouse gas emissions.

Policy 3.2.4: Provide streamlining, incentives and flexibility to for residential buildings that promote energy and resource conservation particularly those that exceed existing green building standards.

Policy 3.2.5 Promote and facilitate reduction of water, energy, carbon and waste consumption in new and existing housing.

Policy 3.2.7 Provide environmentally sustainable development standards and incorporate sustainable best practice in building and zoning code updates.

The Housing Element Update would help reduce reliance on the automobile and increase use of alternative transportation modes. As discussed in 4.2.3, *Methodology*, buildout of the existing land use designations would gradually increase vehicle trips and VMT, however per capita and per service population VMT and trips would each diminish due to reduced average trip lengths. The Housing Element Update would result in a slight reduction in per capita VMT, although overall vehicle trips and VMT would increase when compared to the existing baseline due to the forecast population increase relying on SCAG's 2020-2045

RTP/SCS growth forecasts. This would generally reduce per capita air pollutant emissions associated with vehicle use.

As the Housing Element Update would not conflict with the implementation of TCMs from the AQMP and would include policies to further reduce air pollutant emissions through promoting transportation and land use design factors, the Housing Element Update would be consistent with the AQMP control measures. Impacts would be ***less than significant***.

Threshold 4.2-2	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 4.2-2 Housing development accommodated under the Housing Element Update would result in construction and operational emissions that exceed SCAQMD regional and local significance thresholds. These exceedances would constitute a considerable net increase of NO_X, PM_{10}, and $PM_{2.5}$ and other criteria pollutant emissions for construction related emissions and NO_X, VOC, PM_{10}, and $PM_{2.5}$ for operational emissions in the SCAB. With implementation of mitigation measures AQ-4.2-2(a) and AQ-4.2-2(b), most housing development projects could reduce construction and operational emissions to less than significant. However, it is possible that very large projects, or projects with unusual circumstances, would result in emissions that exceed of SCAQMD significance thresholds despite implementation of appropriate project-specific mitigation. Thus, impacts would be ***significant and unavoidable***.

Housing development accommodated under the Housing Element would generate short-term air pollutant emissions associated with use of heavy-duty construction equipment; truck trips hauling debris, soils, and construction materials; and fugitive dust from demolition and grading. Additionally, long-term air pollutant emissions would result from mobile sources (motor vehicle exhaust), energy use (natural gas combustion), and area sources, such as hearths, landscaping equipment, consumer products, and architectural coatings.

Construction Emissions

The SCAQMD *CEQA Air Quality Handbook* (1993) advises that for both construction and operational activities, if a project exceeds the identified project-level significance thresholds, its emissions would be cumulatively considerable, resulting in significant adverse air quality impacts to the region's existing air quality conditions. Construction activity associated with housing development accommodated under the

Housing Element Update has the potential to create air quality impacts through the use of heavy-duty construction equipment and through vehicle trips generated by construction worker, vendor, and hauling trips to and from individual development sites. Fugitive dust (PM_{10}) emissions, a criteria pollutant for which the SCAB is in nonattainment, would primarily result from demolition and site preparation (e.g., grading) activities. NO_X emissions, a precursor emission to ozone for which the SCAB is also designated nonattainment, would primarily result from the use of construction equipment. During the finishing phase, paving operations and the application of architectural coatings (e.g., paints) and other building materials would release VOCs, the other precursor emission to ozone. Construction emissions can vary substantially from day to day, depending on the level of activity, the specific type of operation and, for dust, the prevailing weather conditions.

As discussed above, future development projects would be required to implement regulatory compliance measures RCM-AQ-1 through RCM-AQ-7. RCM-AQ-1 requires compliance with SCAQMD's Rule 403 Fugitive Dust, which is a control requirement for preventing, mitigating and controlling the release of airborne particulate matter emissions from earth moving activities. It is mandatory for all construction projects in SCAB to comply with Rule 403 or face violations that would incur fines. Specific Rule 403 control requirements include, but are not limited to, applying water in sufficient quantities to prevent the generation of visible dust plumes, applying soil binders to uncovered areas, reestablishing ground cover as quickly as possible, utilizing a wheel washing system to remove bulk material from tires and vehicle undercarriages before vehicles exit the project site, and maintaining effective cover over exposed areas. Compliance with Rule 403 would reduce $PM_{2.5}$ and PM_{10} emissions associated with construction activities by approximately 61 percent (SCAQMD 2007). RCM-AQ-2 requires construction equipment fleets to be upgraded to exhaust PM and NO_X emissions standards. RCM-AQ-3 and RCM-AQ-4 require construction activities to comply with State mandates to reduce vehicle idling and ensure equipment meets emissions standards and fuel specifications, which would reduce NOx and TAC emissions during construction. New construction would also be subject to VOC emission limits for architectural coatings, adhesives and sealants in the City's Green Building Code. In addition, RCM-AQ-5 and RCM-AQ-6 require compliance with SCAQMD Rules 1113 and 1168, respectively, which establish VOC limits to control emissions from the application of architectural coatings, and adhesives and sealants applications.

Table 4.2-13 shows the estimated average daily construction emissions associated with the four sample construction activity scenarios described under Methodology. These scenarios are representative of construction activity intensities for housing development projects under the Housing Element Update. Results of the emissions modeling demonstrates that daily emissions of NO_X from heavy-duty diesel equipment and trucks during construction activities could exceed the SCAQMD regional thresholds under reasonably expected circumstances for projects that involve the use of ten or more pieces of equipment or

smaller projects with greater truck trips (150 or more heavy truck trips), such as projects with large amounts of soil import/export or smaller projects with a large number of workers may also have potential to exceed SCAQMD regional thresholds. Therefore, construction activity accommodated under the Housing Element would result in a significant impact related to regional construction emissions of NO_X. The impact includes potential exposure of sensitive receptors to high concentrations of NO_2, which may result in adverse health effects such as breathing difficulties.

Table 4.2-13 Construction Scenarios – Daily Emissions

Example Scenarios – Daily Activity[1]	Pounds per Day					
	VOC[2]	NO_X	CO	SO_X	PM_{10}	$PM_{2.5}$
2 Heavy-Duty Equipment, 25 Truck Trips	3	37	23	<1	7	4
4 Heavy-Duty Equipment, 50 Truck Trips	4	50	24	<1	9	5
8 Heavy-Duty Equipment, 100 Truck Trips	6	79	38	<1	16	9
10 Heavy-Duty Equipment, 150 Truck Trips	8	**105**	44	<1	20	11
Regional Significance Threshold	75	**100**	550	150	150	55
Threshold Exceedance?	**No**	**Yes**	**No**	**No**	**No**	**No**

[1] Equipment exhaust was estimated using CalEEMod and 8 hours of operation per day. Truck emissions were estimated using CalEEMod and a trip length of 20 miles.

[2] Does not account for application of architectural coatings. Maximum daily VOC emissions may vary greatly depending on the area of coatings applied in a given day.

Source: See Appendix C for modeling results and assumptions.

Although not reflected in Table 4.2-13, maximum daily VOC emissions may vary greatly depending on the area of coatings applied in a given day; and as such, even smaller projects may have potential to exceed SCAQMD regional thresholds. Health effects of VOCs may include eye, nose, throat irritation, headaches, loss of coordination, nausea, damage to liver, kidney, and central nervous system. The City of Los Angeles Department of Building and Safety has established VOC content limits for architectural coatings as part of the 2017 Los Angeles Green Building Code. Compliance with the Los Angeles Green Building Code is mandatory for new development projects in Los Angeles that meet the thresholds specified in the Regulatory Framework section, and implementation of the VOC content limits for architectural coatings substantially reduces the likelihood that off-gassing emissions from painting, finishing, and paving activities would exceed applicable SCAQMD air quality significance thresholds. The SCAQMD has also published Rules 1113 and 1186 that limit VOC content in architectural coating applications. The use of architectural coatings with low VOC content would minimize the potential for daily VOC emissions to exceed the applicable SCAQMD threshold.

The types of housing units anticipated under the Housing Element Update would generally fall into five categories identified below. A review of the housing development in the City in Table 4-2 in Section 4,

Environmental Analysis, shows that air quality impacts were less than significant for the majority of the developments reviewed for construction related activities. Only 2 of the 54 projects had significant unavoidable impacts for construction related activities, the Times Mirror (1,127 multi-family dwellings), and the Crossroads Project (mixed use with 950 multi-family units), both of which are discussed below. The following discusses construction-related air quality impacts of the various project types.

- **Multi-family residential:** Multi-family residential projects may range in size from small apartment buildings with 2-10 units to larger apartment buildings and high-rise structures with hundreds of units. Large multi-family development projects may have the potential to result in more substantial greater emissions; however multi-family residential typically supports sustainable land use patterns that reduce mobile source air pollutant emissions. As listed in Table 4-2 Fig and 8th Project is an example of a multi-family development. The project proposed 438 residential units within a new 41-story high-rise residential tower on a 1.16-acre site in Downtown Los Angeles. Despite the relatively small development footprint, the project required substantial grading including excavation of subterranean parking and building foundations to 50 feet below grade; the project required approximately 105,000 cubic yards of soil export. The EIR found construction NO_X emissions from the project found would be potentially significant:

  > *The estimated emission levels considered represent the highest daily emissions projected to occur during each year of construction. Construction-related daily maximum regional construction emissions (i.e., combined on-site and off-site emissions) would not exceed the SCAQMD daily significance thresholds for VOC, CO, SO_X, PM_{10} and $PM_{2.5}$. However maximum construction-related daily emissions at the Project Site would exceed the SCAQMD daily significance threshold for NO_X during project grading/excavation activities.*

  The EIR identified several mitigation measures including the following:

  > *AIR-MM-5. During grading and excavation activities, the Project shall limit the number of daily hauls for impact/export to 135 per day. The applicant (grading or haul contractor) shall maintain logs documenting the daily number of haul trucks travelling to and from the site during soil import/export activities that shall be provided to the Construction Monitor. The logs shall contain license plate numbers or vehicle identification numbers (VIN) to identify trucks visiting the site. The logs shall be validated every two weeks by the Construction Monitor and maintained on-site and made available to the SCAQMD or the City for inspection upon request. (Fig & 8th FEIR at III-6.)*

The EIR concluded the following after imposition of mitigation measures:

> *Implementation of Mitigation Measure AIR-MM-5 would reduce maximum regional construction emissions to 99 pounds per day and less than the SCAQMD's 100 pounds per day regional significance threshold. (Fig & 8th FEIR at III-4.)*

- **Single-family residential:** Single-family residential projects may range in size and scale from smaller single-family homes to larger single-family homes, and from small-lot subdivisions to multi-property single-family subdivisions. A single-family development with an equal number of units to a multi-family residential development would typically generate greater emissions due to greater trip lengths. However, single family developments that occur in the City would not generally be expected to have significant impacts to criteria pollutants.

  For example, as listed in Table 4-2 the 32 Small Lot Homes Project, which was not yet approved at the time of this EIR preparation, involves the subdivision of a 4.3-acre site, grading, public improvements (roads, curb and gutters, retaining walls, driveways, private pocket parks, utilities, etc.), and construction of 32 single-family residences in the El Sereno neighborhood of North East Los Angeles. The IS-MND analysis prepared for the project determined that air pollutant emissions would be less than SCAQMD's applicable project-level cumulative and LST significance thresholds for construction and therefore would be less than significant.

  Additionally, the much larger single-family home development of the Hidden Creek Estates Project, was also determined to result in less than significant impacts from criteria pollutant emissions. The Hidden Creek Estates Project involved the subdivision and development of 163 single family homes and 25 equestrian residential lots on a 158-acre site in an un-annexed portion of land near Porter Ranch. (Hidden Creek Estates RDEIR at IV.B-29 to 32.)
- **ADUs:** ADUs include attached units that are physically connected to an existing structure, and detached units that are free-standing structures. ADUs may consist of new construction, additional construction, or conversion. ADUs are infill development that is typically constructed one or two units at a time; as such, construction-related emissions would be less than SCAQMD's applicable project-level cumulative and LST significance thresholds for construction and therefore would be less than significant.
- **Mixed use development:** Mixed use development could range in size and scale from neighborhood commercial mixed use with smaller nonresidential components, to high-rise mixed-use with larger nonresidential components. Mixed use developments typically encourage non-automotive trip modes such as walking or bicycling, however large mixed use developments may exceed SCAQMD's applicable project-level cumulative and LST significance thresholds for construction. For example, as listed in Table 4-2 the Times Mirror Square Project would develop a new mixed-use development

consisting of a 37-sory "North Tower" and a 53-story "South Tower" including 1,127 residential units and 34,572 square feet of commercial floor area. The EIR analysis determined that air quality construction emissions would have potential to exceed SCAQMD NO_x regional thresholds due to the amount of heavy-duty construction equipment in-use during the pouring of foundations. All other emission levels for construction were found to be less than significant.

The EIR proposed the following mitigation measures for operational and construction emissions:

MM-AQ-1: The Applicant shall implement construction equipment features for equipment operating at the Project Site. These features shall be included in applicable bid documents and successful contractor(s) must demonstrate the ability to supply such equipment prior to the commencement of any construction activities. Construction features will include the following:

a) *During plan check, the Project representative shall make available to the lead agency and SCAQMD a comprehensive inventory of all off-road construction equipment, equal to or greater than 50 horsepower, that will be used during any of the construction phases. The inventory shall include the horsepower rating, engine production year, and certification of the specified Tier standard. A copy of each such unit's certified tier specification, BACT documentation, and CARB or SCAQMD operating permit shall be provided on-site at the time of mobilization of each applicable unit of equipment to allow the Construction Monitor to compare the on-site equipment with the inventory and certified Tier specification and operating permit. Off-road diesel-powered equipment equal to or greater than 50 horsepower that will be used during any portion of the construction activities shall meet or exceed the Tier 4 standards. Construction contractors supplying heavy duty diesel equipment greater than 50 horsepower shall be encouraged to apply for SCAQMD SOON funds. Information including the SCAQMD website shall be provided to each contractor which uses heavy duty diesel for on- site construction activities.*

b) *Equipment such as tower cranes and signal boards shall be electric or alternative fueled (i.e., non-diesel). Pole power shall be made available for use for electric tools, equipment, lighting, etc. Construction equipment such as tower cranes and signal boards shall utilize electricity from power poles or alternative fuels (i.e., non-diesel), rather than diesel power generators and/or gasoline power generators. If stationary construction equipment, such as diesel- or gasoline-powered generators, must be operated continuously, such equipment shall be located at least 100 feet from sensitive land uses (e.g., residences, schools, childcare centers, hospitals, parks, or similar uses), whenever possible.*

c) *Alternative-fueled generators shall be used when commercial models that have the power supply requirements to meet the construction needs of the Project are commercially available from local suppliers/vendors. The determination of commercial availability of such equipment will be made by the City prior to issuance of grading or building permits based on applicant provided evidence of the*

availability or unavailability of alternative-fueled generators and/or evidence obtained by the City from expert sources such as construction contractors in the region.

MM-AQ-2: The Applicant shall implement the following measures to reduce the emissions of air pollutants generated by heavy-duty diesel-powered equipment operating at the Project Site:

a) Contractors shall maintain and operate construction equipment so as to minimize exhaust emissions. During construction, trucks and vehicles in loading and unloading queues shall have their engines turned off after 5 minutes when not in use, to reduce vehicle emissions.

b) All construction equipment shall be properly tuned and maintained in accordance with the manufacturer's specifications. The contractor shall keep documentation on-site demonstrating that the equipment has been maintained in accordance with the manufacturer's specifications. Tampering with construction equipment to increase horsepower or to defeat emission control devices shall be prohibited.

c) Construction activities shall be discontinued during second-stage smog alerts. A record of any second-stage smog alerts and of discontinued construction activities as applicable shall be maintained by the Contractor on-site.

After imposition of the Mitigation measures the EIR concluded the following for construction impacts from NO_X:

With implementation of mitigation measures, regional NO_X emissions would be reduced substantially, but still exceed the daily emissions threshold during the two continuous concrete pouring foundations phases, which are expected to last up to approximately two days each. Impacts related to regional NO_X construction emissions therefore would be considered significant and unavoidable.

The 1045 Olive Project, in Table 4-2, is a 70-story mixed use high-rise with up to 751,777 square feet of floor area on almost a 1-acre site in the Downtown area. The project included six subterranean levels of parking to a depth of 64 feet and would require excavation and export of approximately 80,520 cubic yards of soil. It also involved the demolition and removal of a 35,651 square foot commercial building. The EIR found the following potential construction impacts:

As shown in Table IV.B-8, construction-related daily emissions would not exceed the SCAQMD numeric indicators of significance with the exception of short-term and temporary NO_X emissions during the one-day continuous concrete pour phase. All other emissions levels would be below the applicable numeric indicators. The NO_X emissions result primarily from on-site construction equipment, and on-road hauling and concrete truck emissions generated during truck travel and idling during the one-day continuous concrete pour phase. Therefore,

the Project's temporary and short-term NO_x impact resulting from the one-day continuous concrete pour phase would be potentially significant, and mitigation measures are required. (1045 Olive Project DEIR at p. IV.B-68.)

The Draft EIR proposed the following mitigation measure:

AQ-MM-1: The Applicant shall implement the following measures to reduce the emissions of air pollutants generated by concrete trucks during the continuous concrete pouring phase lasting for approximately one day:

a) The contractor shall use concrete trucks with an average capacity of 10 cubic yards to minimize the number of concrete truck trips;

b) The contractor shall use local concrete suppliers with 90 percent or more of the concrete supplied by one or more facilities located within a driving distance of approximately 4.5 miles per one-way trip (approximately 9 miles per round trip) and the remaining 10 percent from one or more facilities located within a driving distance of approximately 9 miles per one-way trip (approximately 18 miles per round trip).

c) The contractor shall be required to ensure that approximately 50 percent of the concrete truck trips, equivalent to approximately 19 concrete trucks per hour, are made by CNG-fueled concrete trucks or trucks that achieve the same or lower NO_x emissions as CNG-fueled concrete trucks.

d) During plan check, the Project representative shall make available to the lead agency and SCAQMD a comprehensive inventory of all concrete trucks that will be used during the continuous approximately one-day concrete pouring phase. The inventory shall include the concrete truck capacity, fuel specification, and NO_x emissions rating. A copy of each such unit's certified emissions rating shall be provided on-site at the time of mobilization of each applicable unit of equipment to allow the Construction Monitor to com pare the on-site equipment with the inventory and certified emissions specification.

With imposition of the MM AQ-1 the EIR found the following:

Implementation of AQ-MM-1 would minimize regional NO_x emissions from the one-day continuous concrete pour phase to below the SCAQMD regional numeric indicators. Therefore, impacts related to regional NOX construction emissions would be reduced to less than significant after implementation of mitigation measures. Project level regional construction impacts would be less than significant after implementation of mitigation measures, and the Project's contribution to cumulatively significant construction impacts to air quality would be less than significant for regional NO_x after implementation of mitigation measures.

The Olympia Project in Table 4-2, analyzed with an EIR, is a mixed-use project proposing three high rise towers with 1,367 residential units and 40,000 square feet of restaurant/retail uses or a separate project option with 1,000 hotel rooms and up to 879 residential units and 40,000 square feet of retail. The project is proposed in the Downtown area of the City on a 3.2-acre site. The EIR found that the project would generate construction-related localized PM_{10} and $PM_{2.5}$ emissions in excess of SCAQMD's significance thresholds. The EIR proposed imposition of two mitigation measures:

Mitigation Measure AIR-MM-1: All off-road construction equipment greater than 50 horsepower (hp) shall meet U.S. EPA Tier 4 (final) off-road emission standards, where available, to reduce NO_X, PM_{10}, and $PM_{2.5}$ emissions at the Project Site. In addition, all construction equipment shall be outfitted with Best Available Control Technology (BACT) devices certified by ARB. Any emissions control device used by the contractor shall achieve emissions reductions that are no less than what could be achieved by a Level 3 diesel emissions control strategy for a similarly sized engine as defined by ARB regulations. At the time of mobilization of each applicable unit of equipment, a copy of each unit's certified tier specification, BACT documentation, and ARB or SCAQMD operating permit shall be provided.

Mitigation Measure AIR-MM-2: On-road medium-duty and larger diesel-powered trucks with a gross vehicle weight rating of at least 14,001 pounds shall, at a minimum, comply with USEPA 2010 on-road emissions standards for PM_{10} and NO_X. Contractor requirements to utilize such on-road haul trucks or the next cleanest vehicle available will be included as part of the Project construction contracts

Mitigation Measure AIR-MM-3: Contractors shall maintain and operate construction equipment so as to minimize exhaust emissions. During construction, trucks and vehicles in loading I. Executive Summary 1001 Olympic (Olympia) Project City of Los Angeles Draft Environmental Impact Report June 2018 Page I-24 and unloading queues shall have their engines turned off after five minutes when not in use, to reduce vehicle emissions.

The EIR found that with imposition of AIR-MM-1, AIR-MM-2, and AIR-MM-3 impacts would be less than significant. (Olympic DEIR at IV.B.-27 to 28.)

The mitigation measures identified for the Olympia project are typical mitigation measures imposed for the other projects identified in Table 4-2 that were found to be less than significant impacts with mitigation for construction related emissions. See e.g., 3600 Wilshire SCEA at p. D-10 to 11; Hollywood Center Project at FEIR at p. 4-5; Flower Market FEIR at p. 4-3; West Yucca at FEIR p. 4-6; 340 S Hill Street Equity Residential SCEA at p. VI-16, Santa Monica & Barrington FEIR at p. IV-3. Other mitigation measures to control construction impacts may be found in the Sunset and Gordon EIR requiring compliance with Rule 403 of SCAQMD rules (Sunset and Gordon MMP), 520 Mateo FEIR at

p. 4-6 requiring during site preparation activities to limit simultaneous operation of off-road equipment to no more than five pieces of equipment to mitigate PM_{10} and $PM_{2.5}$; 3600 Wilshire SCEA at p. D-11 requiring grading to be phased; West Yucca at FEIR p. 4-6 MM for use of pole power for electric tools.

- **Conversion and/or rehabilitation:** Existing nonresidential, residential and mixed use structures could be converted to residential uses under the Housing Element Update or rehabilitated to accommodate new residential uses. Conversion and/or rehabilitation typically avoids construction-related air pollutant emissions associated with grading and thus often results in lesser maximum daily NO_X and PM emissions. Otherwise, conversion and/or rehabilitation typically results in air pollutant emissions similar to those generated by other residential uses.

  For example, as listed in Table 4-2, the Crossroads Hollywood Project is a mixed-use project that would rehabilitate Crossroads of the World and the former Hollywood Reporter Building, demolish or relocate all other existing buildings, and construct eight mixed-use buildings. The EIR analysis determined that construction-related air pollutant emissions would have the potential to exceed SCAQMD NO_X significance thresholds. The EIR identified the following mitigation measures:

  M*itigation Measure AIR-MM-1: All construction equipment shall be properly tuned and maintained in accordance with the manufacturer's specifications. The contractor shall keep documentation on-site demonstrating that the equipment has been maintained in accordance with the manufacturer's specifications.*

  Mitigation Measure AIR-MM-2: Contractors shall maintain and operation construction equipment so as to minimize exhaust emissions. During construction, trucks and vehicles in loading and unloading queues shall have their engines turned off after 5 minutes when not in use, to reduce vehicle emissions.

  Mitigation Measure AIR-MM-3: Construction activities shall be discontinued during second-stage smog alerts. A record of any second-stage smog alerts and of discontinued construction activities as applicable shall be maintained by the Contractor on-site.

  Mitigation Measure AIR-MM-4: Construction activity shall utilize electricity from power-poles or solar power, rather than diesel power generators and/or gasoline power generators. If stationary construction equipment, such as diesel- or gasoline-powered generators, must be operated continuously, such equipment shall be located at least 100 feet from sensitive land uses (e.g., residences, schools, childcare centers, hospitals, parks, or similar uses), whenever possible.

  Mitigation Measure AIR-MM-5: During plan check, the Project representatives shall make available to the lead agency and SCAQMD a comprehensive inventory of all off-road construction equipment, equal to or greater than 50 horsepower, that will be used an aggregate of 40 or more hours during any portion of the grading/excavation/export phase. The inventory shall include the horsepower rating, engine production year,

and certification of the specified Tier standard. Ac copy of each such units certified tier specification, BACT documentation, and CARB and AQMD operating permit shall be provided on-site at the time of mobilization of each applicable unit of equipment to allow the Construction Monitor to compare the on-site equipment with the inventory and certified Tier specification and operating permit. Off-road diesel-powered equipment that will be used an aggregate of 40 or more hours during any portion of the construction activities associated with grading/excavation/export phase shall meet Tier 4 standards to the extent such equipment is commercially available, but if such equipment meeting Tier 4 standards is not commercially available, then such equipment shall meet Tier 3 standards. Furthermore, where equipment meeting Tier 4 standards is not commercially available, substantial evidence of that fact shall be provided to the City. Construction contractors supplying heavy duty diesel equipment greater than 50 horsepower shall be encouraged to apply for AQMD SOON funds. Information including the AQMD website shall be provided to each contractor which uses heavy duty diesel for on-site construction activities.

AIR-MM-6: During construction, the Project shall give preference to contractors for soil import/export that have haul trucks meeting EPA Model Year 2007/2010 NO_X emissions levels when such trucks are reasonably available.

The Crossroads EIR concluded:

With implementation of all feasible mitigation, NO_X emissions would continue to exceed SCAQMD significance thresholds for impacts to regional air quality and impacts would be significant and unavoidable.

Based on the above, construction NO_X, PM_{10}, and $PM_{2.5}$ emissions from housing developments accommodated by the Housing Element Update could exceed regional emission standards. Based on a review of the above and the regulatory environment, exceedance of VOC, CO, and SO_2 for construction emissions would likely only occur well after exceedance of NO_X thresholds and would be highly unusual. However, without project details and based on unusual circumstances impacts may occur. Impacts to all criteria pollutants from construction would be ***potentially significant.***

Localized Construction Emissions

As discussed under the Significance Thresholds, above, the SCAQMD has also developed specific LSTs to assess construction and operational air quality impacts associated with individual development projects. The LST values are specific to the SRA in which an individual project is located, the size of the project site, and based on proximity to the nearest sensitive receptor(s). As discussed in the LST Methodology, the LSTs are applicable to projects at the project-specific level and are not applicable to regional projects such as General Plans.

Development accommodated under the Housing Element Update would be substantially similar to existing residential projects, and it is reasonable to assume that some individual projects in the Housing Element Update would involve construction activity adjacent to sensitive receptors (e.g., residences and schools). Continued enforcement of existing regulations such as RCM-AQ-1 (SCAQMD Rule 403 Fugitive Dust Control), RCM-AQ-2 (California Off-Road Diesel-Fueled Fleet Regulations), and RCM-AQ-3 (idling limits for diesel-fueled vehicles) would reduce potential for criteria pollutant release in proximity to sensitive receptors.

Based on a review of CEQA documents that have been reviewed for the purpose of presenting impact analyses that are generally consistent with the findings and mitigation measures for the types of housing projects that occur throughout the City in the past five years, construction-related NO_X, PM_{10}, and $PM_{2.5}$ emissions would have potential to result in localized air quality impacts. But none of the 54 case examples listed in Table 4-2 had significant and unavoidable impacts to localized air quality emissions. The Times Mirror Square Project identified potential impacts in the EIR:

> *… maximum localized construction emissions for sensitive receptors within 25 meters of the Project Site would exceed the localized screening indicators for NO_X, PM_{10}, and $PM_{2.5}$ based on the assumptions described in subsection IV.B.3.a(4), Localized Emissions. Therefore, with respect to localized construction emissions, impacts to existing and future receptors would be considered potentially significant.*
>
> *[…]*
>
> *However, the EIR concluded with implementation of MM AQ-1 and MM-AQ-2 (identified above), the localized NO_X, PM_{10} and $PM_{2.5}$ emissions from construction would be reduced to below the localized numeric indicators and impacts related to localized NO_X, PM_{10} and $PM_{2.5}$ construction emissions would be mitigated to less than significant. (Times Mirror DEIR at IV.B-63 and IV.B-81.)*

As housing development accommodated under the Housing Element Update, such as the Times Mirror project would be anticipated to generate criteria pollutants that exceed the SCAQMD LST thresholds, construction-related impacts related to localized air quality emissions associated with the Housing Element Update for all criteria pollutants are considered ***potentially significant***.

Operational Emissions

The Housing Element would accommodate construction of up to 420,327 new residential units. Estimates of operational emissions of criterial pollutants were estimated based on this number of units (76,920 single-family, 343,407 multi-family). As discussed in Section 3, *Project Description*, the intent of the Housing Element Update is intended to result in construction of housing in locations with good access to jobs,

services, and high-quality public transit. As such, the Housing Element Update would result in sustainable land use patterns that reduce vehicle use, which is reflected by the reduced transportation emissions shown in Table 4.2-14.

Table 4.2-14 Operational Emissions under the Housing Element Update

Scenario	Daily Emissions (Pounds/Day)					
	VOC	NO_X	CO	SO_X	PM_{10}	$PM_{2.5}$
Increase Over Baseline Condition (2029)						
Mobile Sources	-310	-284	-2,968	-6	-798	-215
Energy Sources	196	1,679	714	11	136	136
Area Sources	23,445	8,006	140,190	376	17,478	17,478
Total	23,331	9,401	137,936	380	16,816	17,398
SCAQMD Regional Significance Threshold	*55*	*55*	*550*	*150*	*150*	*55*
Threshold Exceeded?	**Yes**	**Yes**	**Yes**	**Yes**	**Yes**	**Yes**
Source: See Appendix C for model results.						

As shown in Table 4.2-14, while emissions from mobile sources are generally expected to decrease, the anticipated growth in residential housing would result in a net increase of all criteria pollutants due to increased use of consumer products (area sources) and natural gas (energy sources).

As shown in Table 4.2-14, operation of all of the build out of the RHNA accommodated under Housing Element would generate criteria pollutants that far exceed the SCAQMD daily emission thresholds. Comparison of criteria emissions from build out of all RHNA accommodated under the Housing Element would is extremely conservative as the SCAQMD Regional Significance Thresholds are intended for assessment of individual development projects. The scenario, 420,327 new residential units, is also extremely conservative as it does not attempt to quantify the difference between reasonably foreseeable development without adoption of the Housing Element Update; it accounts for all new activity from build out of all RHNA, much of which would occur without adoption of the Housing Element Update. Nonetheless, this comparison is useful for illustrating the magnitude of potential emissions and demonstrating how a low-emissions-intensity land use such as residential development may, without proper mitigation, result in potentially significant air quality emissions.

Additional modeling was performed to determine the largest individual project sizes that would typically be anticipated to result in emissions that do not exceed SCAQMD thresholds. Through iterative modeling it was determined that operation of a 462 single-family unit project or a 612 multi-family unit project (multi-family or mixed use) would typically result in emissions that approach but remain less than SCAQMD thresholds (Appendix C).

The types of housing units anticipated under the Housing Element Update would generally fall into five categories. A review of the housing development in the City in Table 4-2 in Section 4, *Environmental Analysis*, shows that air quality impacts were less than significant for the majority of the developments reviewed. Only 3 of the 54 projects had significant unavoidable impacts for operations; the ICON Panorama (mixed use project; operational impacts due to mobile source emissions), the Crossroads Hollywood (950 multi-family dwellings), and the 1001 Olympic (879-1,367 multi-family dwellings). The following discusses operation-related air quality impacts of these various project types.

- **Multi-family residential:** Multi-family residential projects may range in size from small apartment buildings with 2-10 units to larger apartment buildings and high-rise structures with hundreds of units. Large multi-family development projects may have the potential to result in more substantial greater emissions, however multi-family residential development typically supports sustainable land use patterns that reduce per capita emissions. As listed in Table 4-2 the Hollywood and Wilcox Project is an example of a multi-family development. The project involved the construction of 260 multi-family residential dwelling units, up to 10 percent (26 units) of which would be set aside for workforce housing and 17,800 square feet of commercial uses, comprised of 11,020 square feet of retail, 3,580 square feet of office, and 3,200 square feet of restaurant uses. The EIR analysis determined that operational regional and localized operational emissions (including on site sources such as water heaters, cooking appliances and HVAC, as well as off site sources such as vehicle trips) would be less than less than significant.
- **Single-family residential:** Single-family residential projects may range in size and scale from smaller single-family homes to larger single-family homes, and from small-lot subdivisions to multi-property single-family subdivisions. Single-family developments typically generate greater emissions than multi-family residential developments with an equal number of units due to greater trip lengths.

  For example, as listed in Table 4-2 the 32 Small Lot Homes Project, which involved the subdivision of a 4.3-acre site, grading, public improvements (roads, curb and gutters, retaining walls, driveways, private pocket parks, utilities, etc.), and construction of 32 single-family residences. The IS-MND analysis determined that air pollutant emissions would be less than SCAQMD's applicable project-level cumulative and LST significance thresholds for operations and therefore would be less than significant. Similarly, the Hidden Creek Estates, involving 163 single family homes found impacts to operational emissions to be less than significant.
- **ADUs:** ADUs include attached units that are physically connected to an existing structure, and detached units that are free-standing structures. ADUs may consist of new construction, additional construction, or conversion. ADUs are infill development that is typically constructed one or two units at a time; as such, operations-related emissions would be less than SCAQMD's applicable project-level

cumulative and LST significance thresholds for construction and therefore would be less than significant.

- **Mixed use development:** Mixed use development could range in size and scale from neighborhood commercial mixed use with smaller nonresidential components, to high-rise mixed-use with larger nonresidential components. Mixed use developments typically encourage non-automotive trip modes such as walking or bicycling, however large mixed use developments may exceed SCAQMD's applicable project-level cumulative and LST significance thresholds for operation.

  For example, as listed in Table 4-2 the Hollywood Center Project is a mixed-use development with a large multi-family residential component. The Project proposes 1,005 residential units and 30,176 square feet of commercial uses in four buildings on a 4.4-acre site. The EIR analysis determined that air quality emissions would be less than SCAQMD's applicable project-level cumulative and LST significance thresholds for operations and therefore would be less than significant.

  The Olympia project, analyzed with an EIR, was a mixed-use project proposing 3 high rise towers with 1,367 residential units and 40,000 square feet of restaurant/retail uses or a separate option with 1,000 hotel rooms and up to 879 residential units and 40,000 square feet of retail. The project is proposed in the Downtown area of the City on a 3.2-acre site. The EIR found that the project operations would generate VOC emissions and NO_x emission in excess of SCAQMD's thresholds. The EIR identified the following mitigation measures as feasible:

  Mitigation Measure AIR-MM-4: Property managers shall require all building services to use low VOC cleaning supplies.

  Mitigation Measure AIR-MM-5: Property managers shall require the use of low-VOC paints and coatings for property management. These coatings shall meet regulatory requirements from the SCAQMD.

  Mitigation Measure AIR-MM-6: Property managers shall require building maintenance services to use electric lawnmowers, leaf-blowers, and chainsaws.

  But the EIR found that even with the mitigation measures impacts would be significant and unavoidable and found no feasible mitigation measures to reduce impacts to less than significant. (Olympic DEIR at I-20.)

  For the Times Mirror Square Project discussed above, the EIR analysis determined the Project's operational-related daily emissions would potentially exceed SCAQMD numeric indicators of significant for NO_x. The EIR identified the following feasible mitigation measures:

  Mitigation Measure MM-AQ-3: Landscaping Equipment: The Project representative will require that landscaping equipment used on the Project Site be electric- or battery-powered, rather than liquid fossil-fueled or use equipment that do not require a power or fuel source. Prior to occupancy of the residential

towers, the Project representative shall provide documentation to the City of the use of landscaping contractors, service providers, or maintenance crews that will use equipment that meet the specified requirements. Documentation shall be maintained for the duration of landscaping services and made available to the City upon request.

Mitigation Measure MM-AQ-4: Restaurant Charbroiling: The Project representative will limit the number of restaurants permitted to utilize under-fired charbroiling equipment to two restaurants or less. Restaurants with under-fired charbroiling equipment will meet applicable SCAQMD emission control requirements. Prior to occupancy of the designated commercial spaces by restaurant tenants, the Project representative shall provide documentation to the City of the number of Project Site restaurants with under-fired charbroiling equipment. Documentation shall be maintained and made available to the City upon request.

Mitigation Measure MM-AQ-5: Emergency Generators: The Project representative will schedule routine maintenance and testing of the emergency generators installed on the Project Site on different days. Prior to the installation of emergency generators, the Project representative shall supply documentation to the City that emergency generator testing by contractors, service providers, or maintenance crews will be conducted in accordance with the specified requirements. The Project representative shall maintain records of emergency generator testing, including testing dates, which shall be made available to the City upon request.

After imposition of mitigation measures, the EIR found the following for operational impacts from NO_X:

Implementation of MM AQ-3, MM AQ-4 and MM AQ-5 would reduce regional NO_X emissions from operations by scheduling routine maintenance of emergency generators so that only one emergency generator is maintained on any given day. With implementation of MM AQ-3, MM AQ-4 and MM AQ-5, the regional NO_X emissions from operations would be reduced to below the regional numeric indicator and impacts related to regional NO_X operational emissions would be mitigated to less than significant.

- **Conversion and/or rehabilitation:** Existing nonresidential, residential and mixed-use structures could be converted to residential uses under the Housing Element Update or rehabilitated to accommodate new residential uses. Conversion and/or rehabilitation results in air pollutant emissions similar to those generated by other residential uses.

  For example, as listed in Table 4-2 the Crossroads Hollywood Project is a mixed-use project that included new construction and rehabilitation. The project will rehabilitate Crossroads of the World and the former Hollywood Reporter Building, demolish or relocate all other existing buildings, and construct eight mixed-use buildings to develop 950 housing units, 308 hotel rooms and 190,000 square feet of commercial uses. The EIR found significant unavoidable impacts from NO_X and VOC:

As shown on Table IV.B-6, emissions resulting from operation of the Project at its projected buildout year of 2022 are expected to exceed the SCAQMD's daily regional operational thresholds for VOC and NOx. Although incorporation of Project Design Features and Mitigation Measure L-1 would decrease VOC emissions by eight percent and NOx emissions by 36 percent, air quality impacts from Project operational emissions would remain significant. (Crossroads DEIR at p. IV.B-36; see also Errata at p. 9.)

Impacts from localized operational emissions was found to be less than significant. (Crossroads DEIR at p. IV.B-39)

The Housing Element Update would result in additional residential development substantially similar to existing residential projects and construction-related TAC emissions from large projects would be reviewed at the project-level. Based on all of the above, development accommodated under the Housing Element Update may include individual projects with operation NO_X, VOC, PM_{10}, and $PM_{2.5}$ emissions that could exceed regional emission standards. Based on a review of the above and the regulatory environment, exceedance of CO and SO_2 for construction emissions would likely only occur well after exceedance of NO_X thresholds and would be highly unusual. Impacts to all criteria pollutants from construction would be ***potentially significant.***

Mitigation Measures

The following mitigation measures would address construction and operational emissions associated with housing developments accommodated by the Housing Element Update.

4.2-2(a) Construction Emissions Reduction

For discretionary projects, prior to issuance of a permit to construct and at the expense of the project applicant, the City shall retain a qualified air quality analyst to prepare an Air Quality Impact Analysis to analyze construction emissions for any discretionary project that would include either: demolition of more 13,500 square feet of building area; greater than 5,000 cubic yards of soil cut/fill; greater than 5-acres of graded area; or use of more than ten pieces of heavy-duty construction equipment and 150 truck trips on any given day during demolition, site clearing, or grading. The air quality analysis shall demonstrate that project emissions are less than applicable SCAQMD regional and LST thresholds, and as applicable may include, but is not limited to, the following mitigation:

- Off-road diesel-powered construction equipment greater than 50 horsepower shall be certified for either the Tier 4 Final emission standards for CARB In-Use Off-Road Diesel-Fueled Fleets Regulations or the USEPA Tier 4 emission standards, where available. In the event that Tier 4 engines are not available for any off-road equipment larger than 100 horsepower, that equipment shall be equipped with a Tier 3 engine or an engine that is equipped with retrofit controls to reduce

exhaust emissions of NO_X and DPM to no more than Tier 3 levels unless certified by engine manufacturers or the onsite air quality construction mitigation manager that the use of such devices is not practical for specific engine types.

- All construction equipment shall be outfitted with BACT devices certified by CARB. Any emissions control device used by the contractor shall achieve emissions reductions that are no less than what could be achieved by a Level 3 diesel emissions control strategy for a similarly sized engine as defined by CARB regulations.
- Vehicle idling shall be limited to five minutes as set forth in the California Code of Regulations, Title 13. Signs shall be posted in areas where they will be seen by vehicle operators stating idling time limits.
- Construction contractors shall utilize construction equipment that uses low polluting fuels (i.e. compressed natural gas, liquid petroleum gas, and unleaded gasoline) to the extent that they are available and feasible to use.
- Heavy duty diesel-fueled equipment shall use low NO_X diesel fuel to the extent that it is available and feasible to use.
- Construction haul truck operators for demolition debris and import/export of soil shall use trucks that meet the California Air Resources Board's (CARB) 2010 engine emissions standards at 0.01 grams per brake horsepower-hour of PM and 0.20 grams per brake horsepower-hour of NO_X emissions. Operators shall maintain records of all trucks associated with project construction to document that each truck used meets these emission standards and shall make these records available for inspection upon request by the City of Los Angeles or the South Coast Air Quality Management District (SCAQMD).
- Construction contractors shall use electricity from power poles rather than temporary gasoline or diesel-powered generators, as feasible, or solar where available.
- Consistent with SCAQMD Rule 403, construction contractors shall identify and implement best available dust control measures during active construction operations capable of generating dust.
- Construction contractors shall maintain construction equipment in good, properly tuned operating condition, as specified by the manufacturer, to minimize exhaust emissions. Documentation demonstrating that the equipment has been maintained in accordance with the manufacturer's specifications shall be kept on-site and made available to LADBS inspectors during inspection.
- Construction contractors shall reroute construction trucks away from congested streets or sensitive receptor areas, as feasible.

4.2-2(b) Operations Emissions Reduction

For discretionary projects, prior to issuance of a permit to construct and at the expense of the project applicant, the City shall retain a qualified air quality analyst to prepare an Air Quality Impact Analysis to analyze operational emissions for any discretionary project that would include more than 462 single-family residential units, 612 multi-family residential units, or any equivalent combination thereof. The air quality analysis shall demonstrate that project emissions are less than applicable SCAQMD regional and LST thresholds, and as applicable may include, but is not limited to, the following mitigation:

- Implementation of a Transportation Demand Management Plan.
  - Installation of additional electric vehicle charging stations
  - Public infrastructure improvements (e.g., bus stop shelter improvements)
  - Carpool or ridesharing programs
  - Subsidized transit costs
  - Unbundled parking costs
  - Bicycle amenities (storage, showers, lockers, etc.)
- Use of all-electric appliances (i.e., elimination of natural gas service)
- Use solar or low emission water heaters that exceed Title 24 requirements
- Increased walls and attic insulation beyond Title 24 requirements
- Required use of electric lawnmowers, leaf-blowers, and chainsaws

Significance After Mitigation

Mitigation Measure 4.2-2(a) would require air quality analysis and appropriate air pollutant emissions reduction measures for projects with construction that exceeds screening criteria for projects with large grading or demolition quantities or large areas of soil disturbance are generally based on SCAQMD Rule 403. Additionally, projects with large amounts of heavy-duty construction equipment would air quality analysis and appropriate mitigation. As shown in Table 4.2-13, the criterion for the maximum number of pieces of heavy-duty construction equipment conservatively correlates to the applicable SCAQMD threshold. Implementation of Mitigation Measure 4.2-2(a) would generally reduce air emissions associated with housing development accommodated under Housing Element Update to less than SCAQMD significance thresholds. However, it is possible that projects that do not exceed the established screening criteria could have unusual circumstances that result in construction emissions that exceed of SCAQMD significance thresholds and it is also possible that large projects that require air quality analysis emissions would continue to exceed of SCAQMD significance thresholds with implementation of appropriate project-specific mitigation. In the absence of detailed information regarding the specific development proposed it

is not possible to preclude the possibility that construction would result in cumulatively considerable net increase of any criteria pollutants. Impacts from construction emissions would be ***significant and unavoidable***.

Mitigation Measure 4.2-2(b) would require air quality analysis and appropriate mitigation for projects that exceed screening criteria for operational emissions. With implementation of Mitigation Measure 4.2-2(b), air emissions associated with housing development accommodated under Housing Element Update would be generally reduced to less than SCAQMD significance thresholds. However, it is possible that large projects, or projects with unusual circumstances, would result in emissions that exceed SCAQMD significance thresholds with implementation of appropriate project-specific mitigation. In the absence of detailed information regarding the specific development proposed it is not possible to preclude the possibility that operation would result in cumulatively considerable net increase of any criteria pollutants. Therefore, potential impacts would be ***significant and unavoidable*** even with implementation of mitigation measures.

Associated Health Effects (Sierra Club v. County of Fresno)

The Court in *Sierra Club v. County of Fresno* held that projects with significant air quality impacts need to "relate the expected adverse air quality impacts to likely health consequences or explain why it is not feasible at the time of drafting to provide such an analysis, so that the public may make informed decisions regarding the costs and benefits of the project." Based on the above analysis and conclusions, housing development accommodated under the Housing Element Update is expected to result in significant unavoidable impacts from construction emissions for NO_X, PM_{10}, and $PM_{2.5}$, and from operational emissions for NO_X, VOC, PM_{10}, and $PM_{2.5}$. However, the City finds there is no feasible way to relate the air pollutant emissions from the Housing Element Update to likely health consequences.

While a number of models and tools are available to quantify emissions, these models are limited by a number of factors in determining health impacts of individual development and infrastructure projects as well as local plan-level projects. The USEPA currently performs health impact assessments (HIAs) using the Community Multiscale Air Quality model for pollutant transport modeling and Environmental Benefits Mapping and Analysis Program - Community Edition (BENMAP-CE) for health impact calculations. However, these models are designed to estimate health impacts over a large scale (e.g. city-wide, statewide). In addition, the CMAQ model requires inputs such as regional sources of pollutants and global meteorological data, which are not readily accessible. Other general limitations of the current suite of models include not being able to model concentrations or dispersion of pollutants, the unsuitability of regional models in providing accurate results for local-level plans or individual projects, and limitations on being able to correlate concentrations to related health effects.

As noted in the *Public Health Effects and Sierra Club v. County of Fresno* White Paper, "For local plans or projects that exceed any identified SCAQMD air quality threshold, City EIR documents are able to identify and disclose generalized health effects of certain air pollutants, but are currently limited and are unable to establish an accurate connection between any local plan or project and a particular health effect. At this time, it is infeasible for City EIRs to directly link a plan's or project's significant air quality impacts with a specific health effect. A number of factors contribute to this uncertainty, including the regional scope of air quality monitoring and planning, technological limitations for accurate modeling at a local plan- or project-level, and the intrinsically complex nature between air pollutants and health effects in conjunction with local environmental variables." Establishing an accurate connection between the air pollutant emissions and health effects is further infeasible for the Housing Element Update due to the speculative nature of buildout residential development accommodated under the Housing Element Update.

Threshold 4.2-3	Would the Housing Element Update expose sensitive receptors to substantial pollutant concentrations?

Impact 4.2-3 Housing development accommodated under the Housing Element Update would generate additional TAC emissions; however, emissions would be substantially similar to existing residential projects and continued enforcement of existing regulations would prevent exposure of sensitive receptors to substantial pollutant concentrations. Operation of residential development and mixed-use development paired with residences, would not involve construction of land uses that emit large quantities of TACs. Additionally, the Housing Element Update would not contribute to congested intersection conditions that would result in creation or worsening of a CO hotspot. Construction related TACs however may be potentially significant without mitigation. Feasible mitigation would be anticipated to reduce construction related TACs to less than significant. The Housing Element Update would not expose sensitive receptors to substantial pollutant concentrations and impacts would be ***less than significant with mitigation*** for construction related TACs and ***less than significant*** for all other substantial pollutant concentrations.

Construction Toxic Air Contaminants

Construction would result in various TACs associated with equipment exhaust and off-gassing from various materials applied during construction such as coatings. Of these, the TAC of primary concern associated with construction activities is diesel exhaust which may be released in substantial quantities by use of heavy-duty equipment operations and truck traffic. Although health risks associated with acute

exposure to diesel exhaust are negligible, chronic exposure may contribute to carcinogenic and non-carcinogenic health risks to the respiratory system. The severity of health effects depends upon several factors including the amount of exposure and the duration of exposure.

The specific locations, amount of heavy-equipment use, and duration of construction activity resulting from the Housing Element Update are not currently known. Health risks associated with construction-related diesel exhaust emissions would only have potential to result in significant health risks for large projects with substantial heavy equipment use for a period of several years in close proximity to sensitive receptors. As discussed above, future development projects would be required to implement regulatory compliance measures RCM-AQ-2 (California Off-Road Diesel-Fueled Fleet Regulations) and RCM-AQ-3 (idling limits for diesel-fueled vehicles), which would reduce potential diesel exhaust emissions from construction. Additionally, entitlements for large projects are typically subject to discretionary approvals and subsequent air quality analysis is required pursuant to CEQA to demonstrate that projects would not result in air quality impacts at nearby receptors.

A review of several published EIRs for the largest development projects recently analyzed in the City did not show any significant impacts resulting from construction related to TACs. For example, none of the projects in Table 4-2 had significant impacts from construction related TACs, including but not limited to some of the largest projects:

- Olympia Project: 1.84 million new square feet, occupying a whole city block, and 284,000 cubic yards of soil export (Los Angeles 2018a);
- 2134 Violet Street Project: 569,448 square feet, involving a whole City block, with 239,000 cubic yards of soil export (Los Angeles 2020a);
- Crossroads Project: 1.4 million square feet in the Hollywood Plan Area, 647,753 cubic yards of soil export (Los Angeles 2017);
- Times Mirror: 1.5 million square feet on a 3.6-acre city block, involving 37-story tower and a 53- story tower, and export of 364,000 cubic yards of soil (Los Angeles 2019); and
- 5th and Hill: 260,689 square feet on a .38-acre site, involving 53-story building, with 25,092 cubic yards of soil export (Los Angeles 2018b).

Only one of the projects in Table 4-2 found a potential impact from TACs. In the 6220 West Yucca Project, the EIR found a potential impact related to TACs under a conservative worst-case scenario. The EIR involved demolition of an existing structure and construction of 210 multi-family residential units, 136 hotel rooms, and approximately 12,570 square feet of commercial/restaurant uses on a 1.16-acre site, with export of 120,000 cubic yards of soil. The EIR analysis found that without mitigation the project could result

in a cancer risk of approximately 10.4 in one million and a mitigated cancer risk of .47 with implementation of the following mitigation measure (West Yucca DEIR at p. IV.B-73.):

> *MM-AQ-1: Construction Measures: The Project shall utilize off-road diesel-powered construction equipment that meets the CARB and USEPA Tier 4 Final off-road emissions standards for equipment rated at 50 hp or greater during Project construction. To the extent possible, pole power shall be made available for use with electric tools, equipment, lighting, etc. These requirements shall be included in applicable bid documents and successful contractor(s) must demonstrate the ability to supply such equipment. A copy of each unit's certified tier specification or model year specification and CARB or SCAQMD operating permit (if applicable) IV.B. Air Quality 6220 West Yucca Project City of Los Angeles Draft Environmental Impact Report April 2020 IV.B-81 shall be available upon request at the time of mobilization of each applicable unit of equipment. (West Yucca DEIR at p. IV.B-80.)*

Although the Housing Element Update would result in additional residential development, resulting development would be substantially similar to existing residential projects and construction-related TAC emissions from large projects would be reviewed at the project-level. Although the West Yucca project appears to be an outlier and existing regulations, including SCAQD regulations on diesel trucks, for purposes of conservative analysis and based on potentially unusual circumstances for a particular housing development, impacts from the Housing Element Update related to construction TACs are found to be ***potentially significant.***

Operation Toxic Air Contaminants

The Housing Element Update would accommodate new residential units to meet the City's RHNA allocation. Operation of residential uses does not involve the emission of substantial quantities of TACs. It is reasonable to assume that housing development accommodated under Housing Element would include some mixed-use housing development; however, these uses would typically involve retail and restaurant development paired with residences and also would not involve land uses that emit large quantities of TACs.

None of the 54 projects in Table 4-2 had significant unavoidable impacts for operation-related TAC emissions. Therefore, the Housing Element Update would not expose sensitive receptors to substantial concentration of TACs and impacts would be ***less than significant***.

CO Hotspots

A CO hotspot is a localized concentration of carbon monoxide that is above a carbon monoxide ambient air quality standard; elevated CO levels can occur at roadway intersections that experience high traffic volumes and severe vehicle congestion. Historically, mobile source-related CO concentrations at high-

volume (e.g., congested) intersections have been linked to health concerns according to USEPA and SCAQMD.

CO attainment was also demonstrated in the 2003 AQMP and the region has remained in attainment of CO standards ever since. According to the 2004 Revision to the California State Implementation Plan for Carbon Monoxide, requirements for cleaner vehicles, equipment, and fuels have cut peak CO levels in half since 1980 despite growth (CARB 2004). With cleaner technologies, automobile emissions of CO have steadily declined over the years.

A detailed carbon monoxide analysis was conducted during the preparation of SCAQMD's 2003 AQMP. The locations selected for microscale modeling in the 2003 AQMP included high average daily traffic (ADT) intersections in the SCAB, those which would be expected to experience the highest CO concentrations. The highest CO concentration observed was at the intersection of Wilshire Boulevard and Veteran Avenue on the west side of the city and near the I-405 Freeway. The concentration of CO at this intersection was 4.6 ppm, which is well below the state and federal standards. The Wilshire Boulevard/Veteran Avenue intersection has an ADT of approximately 100,000 vehicles per day (SCAQMD 2003). The 2003 1-hour concentration for this intersection was 4.6 ppm, which indicates that the most stringent 1-hour CO standard (20.0 ppm) would likely not be exceeded until the daily traffic at the intersection exceeded more than 400,000 vehicles per day (Los Angeles 2016). With implementation of the Housing Element Update, no intersection would foreseeably experience daily volumes exceeding 400,000 vehicles per day (see Section 4.14, *Transportation*). Therefore, the Housing Element Update would not have potential to contribute to localized CO concentrations at intersections that exceed state CO standards.

In addition, existing transportation planning policies from the City of Los Angeles Department of Transportation (LADOT) Transportation Assessment Guidelines (2020) require that land use development projects be reviewed for potential to contribute to congestion at intersections[26] and require appropriate traffic calming or physical improvements be implemented to prevent congested intersection conditions (LADOT 2020). For these reasons, housing development accommodated under Housing Element Update would not contribute to congested intersection conditions that result in creation or worsening of a CO hotspot. The Housing Element Update would not expose sensitive receptors to substantial pollutant concentrations and impacts would be ***less than significant***.

[26] Screening Criteria from the Transportation Assessment Guidelines state that "LOS E and F are considered to represent congested conditions" (LADOT 2020).

Mitigation Measures

4.2-3 Construction TAC Reduction Measures

For discretionary projects with an anticipated construction duration of greater than 18-months and located within 500 feet of a residence or other sensitive receptor, prior to issuance of a permit to construct, the applicant shall provide to the City an Air Quality Impact Analysis, prepared by a qualified air quality analyst, that includes a construction health risk assessment. If the analysis shows incremental cancer risk would exceed 10 persons in one million at a sensitive receptor or the calculated Hazard Index for chronic or acute risks would exceed a value of 1.0 at a sensitive receptor, the air quality analyst shall prepare a mitigation plan subject to City review and approval that reduce TACs to less than SCAQMD thresholds. The applicant shall comply with all mitigation measures in the mitigation plan.

Alternatively, no Air Quality Impact Analysis and mitigation plan shall be required for discretionary projects conditioned to use construction equipment that meets the CARB Tier 4 Final or USEPA Tier 4 off-road emissions for all equipment rated 50 horsepower or greater. A copy of each unit's certified tier specification or model year specification and CARB or SCAQMD operating permit (if applicable) shall be available upon request at the time of mobilization of each applicable unit of equipment.

Significance After Mitigation

Mitigation Measure 4.2-3 would require construction health risk assessments be performed for discretionary projects with sufficient duration and proximity to expose nearby sensitive receptors to substantial pollutant concentrations. Screening criteria are loosely based on the duration of the West Yucca project and are intended to be more conservative. Whereas the West Yucca project had a duration of 22 months and was less than immediately adjacent to sensitive receptors, screening levels have been established for 18 months and 500 feet of separation. As exposure is correlated to project duration and is inversely correlated to separation distance, these screening levels would exempt further analysis projects that would not contribute to substantial pollutant exposure. Additionally, projects that voluntarily incorporate use of certified low-emission equipment are exempted from further analysis because such projects would not generate substantial pollutant concentrations.

Imposition of Mitigation Measure 4.2-3 would be anticipated to reduce impacts to less than significant from TACs similar to the analysis in the West Yucca EIR. Any project of the size and scale that could produce TAC construction related impacts would be subject to discretionary site plan review and be subject to Mitigation Measure 4.2-3 or be subject to independent CEQA analysis. Therefore, impacts would be foreseeable ***less than significant with mitigation.***

Cumulative Impacts

As discussed in *Environmental Setting*, the SCAB is named so because its geographical formation is that of a basin, with the surrounding mountains trapping the air and its pollutants in the valleys below. The SCAB encompasses all of Orange County and the non-desert portions of Los Angeles, San Bernardino, and Riverside Counties. Cumulative projects would include any reasonably anticipated development in SCAB for regional air quality impacts, as well as housing development accommodated under the Housing Element Update for localized air quality impacts.

Conflict with Applicable Air Quality Plan

The Housing Element Update does not encourage or promote growth beyond the SCAG forecasts of regional growth; therefore, the Housing Element Update would not conflict with the growth assumptions used in the development of the AQMP. The Housing Element Update would include policies that support reduce air pollutant emissions by promoting sustainable transportation and land use design features and would not conflict with implementation of TCM from the AQMP. Similar to direct air quality impacts, cumulative air quality impacts would be ***less than significant***.

National and State Air Quality Standards

In order to assess cumulative impacts of emissions, the SCAQMD recommends that projects be evaluated to determine whether they would be consistent with AQMP performance standards and project-specific emissions thresholds. In the case of the Housing Element Update, air pollutant emissions would be considered to be cumulatively considerable if the new sources of emissions exceed SCAQMD project-specific emissions thresholds. The cumulative context for consideration of most air quality impacts is the SCAB. The context for localized significance thresholds is within 1,500 feet of the project site per SCAQMD LST guidance, as health risks generally decrease by about 90 percent at 1,500 feet from the emission source (SCAQMD 2017).

As discussed under Impact 4.2-2, construction activities and operation of development accommodated under Housing Element could result in significant impacts related to criteria emissions. Without a specific construction schedule, timing and emission levels cannot be accurately estimated; it is possible that multiple construction projects will occur concurrently and immediately adjacent to one another. Similarly, without specific land use details, it is possible that the Housing Element may accommodate operation of large projects in close proximity (e.g. residential high-rises) and thereby result in cumulative operations emissions that exceed SCAQMD thresholds. Therefore, reasonably expected construction and operation from the Housing Element Update has the potential to be cumulatively considerable. Implementation of regulatory compliance measures RCM-AQ-1 through RCM-AQ-7 and Mitigation

Measure 4.2-2(a) and 4.2-2(b) would reduce emissions generated by various construction activities, including equipment operation, truck trips, and painting and operational sources including vehicle use, natural gas use, and other area sources.

Housing development accommodated under the Housing Element Update would include development that is substantially similar to existing residential projects and continued enforcement of existing regulations would reduce potential for multiple adjacent development projects to contribute to deterioration of air quality. Nonetheless, in the absence of detailed information regarding the specific development proposed it is not possible to preclude the possibility of multiple adjacent development projects that result in a local deterioration of air quality. Cumulative air quality impacts would be ***significant and unavoidable***.

Toxic Air Contaminants

The Housing Element would not directly exacerbate existing conditions related to TAC concentrations as operation of residential development is not associated with substantial TAC emissions. Each individual future project would be responsible for demonstrating compliance with the air quality thresholds of significance devised by the SCAQMD that are designed to protect public health and prevent exposures to substantial pollutant concentrations. For these reasons, cumulative impacts related to operational emissions of toxic air contaminants would not be cumulatively considerable. Cumulative impacts would be ***less than significant***.

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4.3 BIOLOGICAL RESOURCES

This section assesses potential for projects under the Housing Element Update and the Safety Element Update to impact biological resources directly or indirectly. The Initial Study (Appendix A) concludes that the Proposed Project may impact special-status species, nesting birds, and wildlife movement, but does not have the potential to result in significant effects to other biological resources, such as Significant Ecological Areas (SEAs); wetlands, streams, rivers; Habitat Conservation Plans (HCPs); and other applicable plans, policies, and ordinances related to biological resources. Therefore, this section focuses on whether housing development accommodated under the Housing Element Update or the policies and programs of the Safety Element would result in any substantial adverse effects, either directly or through habitat modifications, on special-status species, sensitive habitat or similarly protected biological resources (e.g., protected trees), or wildlife movement.

4.3.1 ENVIRONMENTAL SETTING

As the nation's second largest city, Los Angeles is generally characterized primarily by urbanized environments that lack native biological habitats. However, there are still substantial areas of native habitat in the mountain ranges that cut through and surround the City, and the coastal and riparian corridors. There are 17 ecological subregions within the City of Los Angeles and 10 additional related ecological subregions within neighboring areas City (City of Los Angeles 2020). According to the City's Biological Index, "Los Angeles lies within a designated 'global biodiversity hotspot,'… a "designation means that biodiversity is both highly concentrated and highly threatened…(City of Los Angeles 2020)."

Urbanization has substantially reduced the abundance and diversity of biological resources in Los Angeles, particularly in the central and southern portions of the City. Remaining open space in the City's 478 square miles is primarily limited to approximately 214 square miles of mountainous terrain that bounds the San Fernando and San Gabriel valleys (the Simi Hills, Santa Susana Mountains, San Gabriel Mountains, and Verdugo Mountains); the eastern end of the Santa Monica Mountains, which separates the San Fernando Valley from the coastal plain; isolated portions of the coast; and limited areas along the Los Angeles River. The largest collection of publicly owned natural habitats in the City are the parks and open spaces in the above-mentioned mountains (City of Los Angeles 2001). Smaller isolated mountainous remnants also remain in both the San Fernando Valley (Pierce College, Chalk Hills, Jessup Park) and on the coastal plain (Baldwin Hills).

Lowland areas of the coastal plain and San Fernando Valley that support wildlife include the Sepulveda flood control basin, Tujunga and Pacoima spreading grounds, and Harbor Lake Park. Coastal areas that continue to support wildlife include the beaches and coastal canyons of the Pacific Palisades area; the dunes

and estuarine wetlands of the southwest coastline (including Ballona Wetlands), beaches, headlands, and coastal promontories of the Palos Verdes peninsula, and Terminal Island in Los Angeles Harbor.

Habitat types that remain in the City are limited, but diverse. Chaparral is prevalent generally on the north slopes and higher elevation south slopes of the Santa Monica and Verdugo Mountains. Coastal scrub and grassland are prevalent on lower-elevation south slopes of these same ranges as well as in the Simi Hills, Santa Susana, and San Gabriel Mountains. Each of these mountain ranges also has riparian areas that support willow and oak woodlands as well as sycamore, cottonwood, alder, walnut, and maple woodlands. In the northwest San Fernando Valley, a small area on the northwest slope of the Santa Susana Mountains supports a coniferous woodland of bigcone spruce. Along the coast, sandy beaches, rocky cliffs, headlands, and promontories support marine songbirds and waterfowl. The coastal saltmarsh, saltflats, freshwater marsh, riparian scrub, bluffs, and dunes of the southwestern coastal area of the City support various plant and animal species.

Limited areas supporting annual grassland, including but not limited to Chatsworth Reservoir, Harbor Regional Park, and the Sepulveda and Hansen flood control basins, are some of the last remnants of habitat for migratory waterfowl, songbirds, and birds of prey. Some of these areas are augmented by open water habitats. Ballona Wetlands in Playa Vista and Terminal Island also support and serve as nesting sites for various bird species.

Special-Status Species and Sensitive Habitat

Special-status species are those plants and animals listed, proposed for listing, or candidates for listing as Threatened or Endangered by the United States Fish and Wildlife Service (USFWS) under the Federal Endangered Species Act (FESA); those considered "Species of Concern" by the USFWS; those listed or candidates for listing as Rare, Threatened, or Endangered by the California Department of Fish and Wildlife (CDFW) under the California Endangered Species Act (CESA); animals designated as "Fully Protected" by the California Fish and Game Code (CFGC); animals listed as "Species of Special Concern" (SSC) by the CDFW; CDFW Special Plants, specifically those with California Rare Plant Ranks (CRPR) of 1B, 2, 3, and 4 in the CNPS's Inventory of Rare and Endangered Vascular Plants of California (CNPS 2020); and birds identified as sensitive or watch list species by the Los Angeles County Sensitive Bird Species Working Group (2009).

Citywide Special-Status Species

Appendix E contains a list of the special-status species that have been recorded in Los Angeles County from the California Natural Diversity Database (CNDDB). The CNDDB includes all taxa that are listed by the CESA, as well as most federally listed taxa that occur in California. Additionally, the CNDDB includes

elements that are considered rare by experts. Many of the listed observations are historic (i.e., found in habitat that is no longer present). Therefore, while it is likely that several of these species are found in the City of Los Angeles' open space areas and undeveloped vegetated hillsides at the wildland-urban interface, most of the species on this list would have low potential to occur on, and adjacent to, housing sites accommodated under the Housing Element Update and are not expected to be present due to the lack of suitable habitat or other factors (e.g., urban development, nighttime noise and light, domestic animals); nevertheless, these species may be observed within the City including areas where build out of the RHNA may occur.

Querying the CNDDB for the City of Los Angeles, which encompasses 20 USGS Quadrangles, identifies 130 sensitive plants and wildlife species that have been documented within the City of Los Angeles, nearly all of which are historic occurrences in habitat that has since been developed (Appendix E). Federally- and/or state-designated threatened and endangered species, and California Species of Special Concern (SSC) or California Fully Protected species that have the potential to occur in areas subject to development under the Proposed Project are listed in Table 4.3-1. In addition, mountain lions (*Puma concolor*) are legally classified as "specially protected species." In July 2019, the Center for Biological Diversity petitioned the Fish and Game Commission to list mountain lions as threatened under the California Endangered Species Act (CESA) within a proposed evolutionarily significant unit (ESU) located in Southern California and along the central coast of California. In April 2020, the Commission found that listing of this ESU may be warranted and designated mountain lion within the ESU as a candidate species under CESA.

Table 4.3-1 Special-Status Plant and Wildlife Species with Potential to be Affected by the Proposed Project

Scientific Name	Common Name	Habitat	Status Federal[1]/ State[2]	CDFW[3] /CRPR[4]
Plants				
Abronia maritima	red sandverbena	Coastal dunes below 100 m asl.	__/__	__/4.2
Astragalus brauntonii	Braunton's milk-vetch	Chaparral, Coastal scrub, Valley and foothill grassland recent burns or disturbed areas, usually sandstone with carbonate layers. 4 - 640 m. perennial herb. Blooms Jan-Aug	FE/__	__/1B.1
Astragalus pycnostachyus var. lanosissimus	Ventura Marsh milk-vetch	Coastal dunes, Coastal scrub, Marshes and swamps (edges, coastal salt or brackish). 1 - 35 m. perennial herb. Blooms (Jun)Aug-Oct	FE/SCE	__/1B.1

Scientific Name	Common Name	Habitat	Status Federal[1]/ State[2]	CDFW[3] /CRPR[4]
Astragalus tener var. titi	coastal dunes milk-vetch	Sandy, often vernally mesic habitats in coastal bluff scrub, coastal dune, and coastal prairie communities between 1 and 50 m asl.	FE/SE	__/1B.1
Berberis nevinii	Nevin's barberry	Chaparral, Cismontane woodland, Coastal scrub, Riparian scrub sandy or gravelly. 70 - 825 m. perennial evergreen shrub. Blooms (Feb)Mar-Jun	FE/SCE	__/1B.1
Camissoniopsis lewisii	Lewis' evening primrose	Sandy or clay soils in coastal bluff scrub, cismontane woodland, coastal dunes, coastal scrub, valley and foothill grassland communities between 0 and 300 m asl.	__/__	__/3
Centromadia parryi ssp. Australis	southern tarplant	Vernally mesic, often alkaline, habitats in marshes and swamp margins, valley and foothill grassland, and vernal pool communities between 0 and 427 m asl.	__/__	__/1B.1
Chaenactis glabriuscula var. orcuttiana	Orcutt's pincushion	Sandy habitats in coastal bluff scrub and coastal dunes communities between 3 and 100 m asl.	__/__	
Chenopodium littoreum	coastal goosefoot	Coastal dune communities between 10 and 30 m asl.	__/__	
Chorizanthe parryi var. fernandina	San Fernando Valley spineflower	Sandy soils in coastal scrub and valley and foothill grassland communities between 150 and 1220 m asl.	FCE/SE	__/1B.1
Deinandra paniculata	paniculate tarplant	Usually vernally mesic, sometimes sandy habitat, such as: coastal scrub; valley and foothill grassland; vernal pools.	__/__	__/4.2
Dichondra occidentalis	western dichondra	Chaparral, cismontane woodland, coastal scrub, and valley and foothill grassland communities between 50 and 500 m asl.	__/__	__/4.2
Dithyrea maritima	beach spectaclepod	Sandy soils in coastal dune and scrub communities between 3 and 50 m asl.	__/ST	__/1B.1

Scientific Name	Common Name	Habitat	Status Federal[1]/ State[2]	CDFW[3] /CRPR[4]
Dodecahema leptoceras	slender-horned spineflower	Chaparral, Cismontane woodland, Coastal scrub (alluvial fan) sandy. 200 - 760 m. annual herb. Blooms Apr-Jun	FE/SCE	__/1B.1
Dudleya cymosa ssp. ovatifolia	Santa Monica dudleya	Chaparral, Coastal scrub volcanic or sedimentary, rocky. 150 - 1675 m. perennial herb. Blooms Mar-Jun	FT/__	__/1B.1
Eryngium aristulatum var. parishii	San Diego button-celery	Coastal scrub, Valley and foothill grassland, Vernal pools mesic. 20 - 620 m. annual / perennial herb. Blooms Apr-Jun	FE/SCE	__/1B.1
Erysimum insulare	island wallflower	Grows in the sand along the coast.	__/__	__/1B.3
Erysimum suffrutescens	suffrutescent wallflower	Coastal bluff scrub, Chaparral (maritime), Coastal dunes, Coastal scrub 0150 m	__/__	__/4.2
Hordeum intercedens	vernal barley	Saline flats and depressions in coastal dune, coastal scrub, valley and foothill grassland and vernal pool communities between 5 and 1,000 m asl.	__/__	__/3.2
Juncus acutus ssp. leopoldii	southwestern spiny rush	Mesic and alkaline habitats in coastal dune, meadow, seep, marsh and swamp communities between 3 and 900 m asl.	__/__	__/4.2
Lasthenia glabrata ssp. Coulteri	Coulter's goldfields	Alkaline soils in coastal salt marshes and swamps, playas, and vernal pools between 1 and 1,220 m asl.	__/__	__/1B.1
Navarretia prostrata	prostrate vernal pool navarretia	Alkaline soils, vernal pools and mesic habitats within coastal scrub, meadow, seep and valley and foothill grassland communities between 15 and 700 m asl.	__/__	__/1B.1
Pentachaeta lyonii	Lyon's pentachaeta	Chaparral (openings), Coastal scrub, Valley and foothill grassland rocky, clay. 30 - 690 m. annual herb. Blooms (Feb)Mar-Aug	FE/SCE	__/1B.1

Scientific Name	Common Name	Habitat	Status Federal[1]/ State[2]	CDFW[3] /CRPR[4]
Phacelia ramosissima var. austrolitoralis	south coast branching phacelia	Sandy, sometimes rocky habitats in chaparral, coastal dune, coastal scrub, and coastal salt marsh and swamp communities between 6 and 300 m asl.	__/__	__/3.2
Phacelia stellaris	Brand's star phacelia	Coastal dune and coastal scrub communities between 1 and 400 m asl.	__/__	__/1B.1
Potentilla multijuga	Ballona cinquefoil	Presumed extinct. Brackish meadows and seeps between 0 and 2 m asl.	__/__	__/1A
Suaeda esteroa	estuary seablite	Clay, silt and sand substrates in coastal salt marshes and swamps between 0 and 5 m asl.	__/__	__/1B.2
Suaeda taxifolia	woolly seablite	Coastal bluff scrub, Coastal dunes, Marshes and swamps (margins of coastal salt) 050 m	__/__	__/4.2
Wildlife				
Invertebrates				
Streptocephalus woottoni	Riverside fairy shrimp	Found in vernal pools, ponds, and other ephemeral pool-like bodies of water. During dry periods, cysts of the species lay dormant in the soil and hatch when adequate rainfall fills the ponds and pools.	FE/__	__/__
Euphilotes battoides allyni	El Segundo blue butterfly	Restricted to remnant coastal dune habitat in Southern California. Host plant is Eriogonum parvifolium; larvae feed only on the flowers and seeds; used by adults as major nectar source.	FE/__	__/__
Birds				
Accipiter cooperii	Cooper's hawk	Nests in open forests, groves, or trees along rivers, or low scrub of treeless areas. The wooded area is often near the edge of a field or water opening.	__/__	WL/__
Ammodramus savannarum	grasshopper sparrow	Occurs in dry, dense grasslands, especially those with a variety of grasses and tall forbs and scattered shrubs for singing perches.	__/__	SSC/__

Scientific Name	Common Name	Habitat	Status Federal[1]/ State[2]	CDFW[3] /CRPR[4]
Aquila chrysaetos	golden eagle	Inhabits open terrain in deserts, mountains, slopes, and valleys. Nest mainly on cliffs, also in large trees (such as oaks), and rarely on artificial structures or the ground.	__/__	FP; WL/__
Aythya americana	Redhead	Found near lakes/ponds.	__/__	SSC/__
Agelaius tricolor	tricolored blackbird	Highly colonial species, most numerous in Central Valley & vicinity. Largely endemic to California. Requires open water, protected nesting substrate, and foraging area with insect prey within a few km of the colony.	__/ST	SSC/__
Branta bernicla	Brant	Found in marsh habitat; breeds in the high Arctic tundra and winters along both coasts.	__/__	SSC/__
Buteo regalis	ferruginous hawk	Forages in agricultural and urban habitats, as well as creosote bush and saltbush scrub. Breeds in isolated trees, small groves of trees, on rocky ledges, or occasionally on the ground. Nests are adjacent to open areas such as grasslands or shrub lands. Prefers open country, where it often hunts from low perches on fence posts, utility poles, or small trees. Occurs in Los Angeles County only as a winter visitant.	__/__	WL/__
Chaetura vauxi	Vaux's swift	Nests in coniferous or mixed forest. Forages in forest openings, especially above streams.	__/__	SSC/__
Charadrius alexandrinus nivosus	western snowy plover	Nests, feeds, and takes cover on sandy or gravelly beaches along the coast, on estuarine salt ponds, alkali lakes, and at the Salton Sea. Requires a sandy, gravelly or friable soil substrate for nesting.	FT/__	SSC/__
Chlidonias niger	black tern	Inhabits marsh habitat.	__/__	SSC/__

Scientific Name	Common Name	Habitat	Status Federal[1]/ State[2]	CDFW[3] /CRPR[4]
Circus cyaneus	northern harrier	Most commonly found in large, undisturbed tracts of wetlands and grasslands with low, thick vegetation. Breeds in freshwater and brackish marshes, lightly grazed meadows, old fields, tundra, dry upland prairies, drained marshlands, high desert shrubs, teppe, and riverside woodlands.	__/__	SSC/__
Cistothorus palustris clarkae	Clark's marsh wren	Nests in variety of marshes, especially with dense reeds.	__/__	SSC/__
Elanus leucurus	whitetailed kite	Inhabits rolling foothills and valley margins with scattered oaks and river bottomlands or marshes next to deciduous woodland. Forages in open grasslands, meadows or marshes close to isolated, dense topped trees for nesting and perching.	__/__	FP/__
Empidonax traillii extimus	southwestern willow flycatcher	Riparian woodlands in Southern California.	FE/SE	__/__
Eremophila alpestris actia	California horned lark	Inhabits coastal regions from Sonoma County to San Diego County Inhabits shortgrass prairie, "bald" hills, mountain meadows, open coastal plains, fallow grain fields, and alkali flats.	__/__	WL/__
Falco columbarius	Merlin	Inhabits seacoast, tidal estuaries, open woodlands, savannas, edges of grasslands and deserts, farms and ranches. Clumps of trees or windbreaks are required for roosting in open country.	__/__	WL/__
Falco peregrinus anatum	American peregrine falcon	Near wetlands, lakes, rivers, or other water; on cliffs, banks, dunes, mounds; also, human-made structures, especially high-rise buildings in City centers. Nest consists of a scrape or a depression or ledge in an open site.	FD/SD	FP/__

Scientific Name	Common Name	Habitat	Status Federal[1]/ State[2]	CDFW[3] /CRPR[4]
Grus canadensis tabida	greater sandhill crane	Breeds and forages in open prairies, grasslands, and wetlands. Nests in marshes, bogs, wet meadows, prairies, burnedover aspen stands, and other moist habitats, preferring those with standing water. Outside of the breeding season, they often roost in deeper water of ponds or lakes, where they are safe from predators.	__/ST	FP/__
Ixobrychus exilis	least bittern	Inhabits freshwater or brackish marshes with tall emergent vegetation.	__/__	SSC/__
Lanius ludovicianus	loggerhead shrike	Found in broken woodlands, savanna, pinyonjuniper woodland, Joshua tree woodland, riparian woodland, desert oases, scrub, and washes. Prefers open country for hunting, with perches for scanning, and fairly dense shrubs and brush for nesting.	__/__	SSC/__
Mycteria americana	wood stork	Inhabits marsh habitat.	__/__	SSC/__
Pandion haliaetus	Osprey	Found near bodies of water: saltmarshes, rivers, ponds, reservoirs, and estuaries.	__/__	WL/__
Passerculus sandwichensis beldingi	Belding's savannah sparrow	Breeds on the southern coast from Santa Barbara to San Diego County. Nests in Salicornia on and about margins of tidal flats.	FE/__	__/__
Passerculus sandwichensis rostratus	Large-billed savannah sparrow	Inhabits grasslands with few trees and tidal saltmarshes and estuaries.	__/__	SSC/__
Plegadis chihi	White-faced ibis	Feeds in fresh emergent wetland, shallow lacustrine waters, muddy ground of wet meadows, and irrigated or flooded pastures and croplands. Nests in dense, fresh emergent wetland. Roosts amidst dense, freshwater emergent vegetation such as bulrushes, cattails, reeds or low shrubs over water. Extensive marshes are required for nesting.	__/__	WL/__

Scientific Name	Common Name	Habitat	Status Federal[1]/ State[2]	CDFW[3] /CRPR[4]
Polioptila californica	coastal California gnatcatcher	Obligate, permanent resident of coastal sage scrub below 2500 ft in Southern California. Low, coastal sage scrub in arid washes, on mesas and slopes. Not all areas classified as coastal sage scrub are occupied.	FT/__	SSC/__
Sternula antillarum browni	California least tern	Nests along the coast from San Francisco Bay south to northern Baja California. Colonial breeder on bare or sparsely vegetated, flat substrates: sand beaches, alkali flats, landfills, or paved areas.	FE/SE	FP/__
Vireo bellii pusillus	least Bell's vireo	Summer resident of Southern California in low riparian in vicinity of water or in dry river bottoms; below 2000 ft. Nests placed along margins of bushes or on twigs projecting into pathways, usually willow, Baccharis, mesquite.	FE/SE	__/__
Xanthocephalus xanthocephalus	yellowheaded blackbird	Breeds and roosts in freshwater wetlands with dense, emergent vegetation such as cattails. Forages in fields, typically wintering in large, open agricultural areas.	__/__	SSC/__
Reptiles				
Anniella pulchra	California legless lizard	Leaf litter associates with sandy or loose loamy soil of high moisture content under sparse vegetation	__/__	SSC/__
Emys marmorata	western pond turtle	Requires basking sites such as partially submerged logs, vegetation mats or open mud banks and needs suitable nesting sites in permanent or near permanent bodies of water in many habitat types below 2,000 m asl.	__/__	SSC/__

Scientific Name	Common Name	Habitat	Status Federal[1]/ State[2]	CDFW[3] /CRPR[4]
Mammals				
Antrozous pallidus	pallid bat	Deserts, grasslands, shrublands, woodlands and forests. Most common in open, dry habitats with rocky areas for roosting. Roosts must protect bats from high temperatures. Very sensitive to disturbance of roosting sites.	__/__	SSC/__
Corynorhinus townsendii	Townsend's big-eared bat	Throughout California in a wide variety of habitats. Most common in mesic sites. Roosts in the open, hanging from walls and ceilings. Roosting sites limiting. Extremely sensitive to human disturbance.	__/__	SSC/__
Eumops perotis californicus	western mastiff bat	Many open, semi-arid to arid habitats, including conifer & deciduous woodlands, coastal scrub, grasslands, chaparral, etc. Roosts in crevices in cliff faces, high buildings, trees and tunnels.	__/__	SSC/__
Lasiurus xanthinus	western yellow bat	Found in valley foothill riparian, desert riparian, desert wash, and palm oasis habitats. Roosts in trees, particularly palms. Forages over water and among trees.	__/__	SSC/__
Lepus californicus bennettii	San Diego black-tailed jackrabbit	Intermediate canopy stages of shrub habitats & open shrub / herbaceous & tree / herbaceous edges. Coastal sage scrub habitats in Southern California.	__/__	SSC/__
Macrotus californicus	California leaf-nosed bat	Desert riparian, desert wash, desert scrub, desert succulent scrub, alkali scrub and palm oasis habitats. Needs rocky, rugged terrain with mines or caves for roosting.	__/__	SSC/__
Microtus californicus stephensi	south coast marsh vole	Tidal marshes in Los Angeles, Orange and southern Ventura Counties.	__/__	SSC/__

Scientific Name	Common Name	Habitat	Status Federal[1]/ State[2]	CDFW[3] /CRPR[4]
Neotoma lepida intermedia	San Diego desert woodrat	Coastal scrub of Southern California from San Diego County to San Luis Obispo County. Moderate to dense canopies preferred. They are particularly abundant in rock outcrops, rocky cliffs, and slopes.	__/__	SSC/__
Nyctinomops femorosaccus	pocketed free-tailed bat	Variety of arid areas in Southern California; pine-juniper woodlands, desert scrub, palm oasis, desert wash, desert riparian, etc. Rocky areas with high cliffs.	__/__	SSC/__
Nyctinomops macrotis	big free-tailed bat	Low-lying arid areas in Southern California. Need high cliffs or rocky outcrops for roosting sites. Feeds principally on large moths.	__/__	SSC/__
Perognathus longimembris brevinasus	Los Angeles pocket mouse	Lower elevation grasslands and coastal sage communities in and around the Los Angeles Basin. Open ground with fine, sandy soils. May not dig extensive burrows, hiding under weeds and dead leaves instead.	__/__	SSC/__
Perognathus longimembris pacificus	Pacific pocket mouse	Inhabits the narrow coastal plains from the Mexican border north to El Segundo, Los Angeles County. Seems to prefer soils of fine alluvial sands near the ocean, but much remains to be learned.	FE/__	SSC/__
Puma concolor	Mountain lion	Inhabit diverse habitats across most of California. Mountain lions can be found wherever deer are present. Primarily found in foothills and mountainous areas.	__/SCT	__/__
Sorex ornatus salicornicus	southern California saltmarsh shrew	Coastal marshes in Los Angeles, Orange and Ventura Counties. Requires dense vegetation and woody debris for cover.	__/__	SSC/__

Scientific Name	Common Name	Habitat	Status Federal[1]/ State[2]	CDFW[3] /CRPR[4]
[1] United States legal status under the Federal Endangered Species Act.				
FT – Federally Threatened; FE – Federally Endangered; FD – Federally Delisted				
[2] State of California legal status.				
ST – State Threatened; SE – State Endangered; SCE – State Candidate Endangered: SD – State Delisted				
[3] California Department of Fish and Wildlife designation and applies to animals only.				
SSC - species of special concern; FP – Fully Protected				
[4] California Native Plant Society rare plant rank status applies to plants only.				
1B.1 - rare, threatened or endangered in California and elsewhere; seriously threatened in California.				
Source: California Department of Fish and Wildlife, California Natural Diversity Database (CNDDB), https://www.wildlife.ca.gov/Data/CNDDB/Mapsand-Data, February 2021.				

Citywide Sensitive Habitats

Native habitat that could support special-status species is largely limited to open space areas in the northern portion of the City, isolated portions of the coast, Santa Monica Mountains, Griffith Park, and limited areas of the Los Angeles River. There is also a lot of habitat that has housed special-status species in landslide areas in San Pedro and Pacific Palisades, along with other sloped and coastal lands. In northeast portions of the city, such as the Mount Washington neighborhood and areas like Elysian Park, Debs Regional Park, and Elephant Hill are enclaves of native habitat surrounded by development. The central and southern portions of the City are highly urbanized and generally lack native habitat. Nevertheless, green spaces (e.g., parks, golf courses, cemeteries) located in these areas can provide suitable habitat for special-status species.

Sensitive Natural Communities

Plant communities are considered sensitive if they have limited distributions, have high wildlife value, include sensitive species, or are particularly susceptible to disturbance. The CDFW California Sensitive Natural Communities list identifies sensitive natural communities throughout California, based in part on global and state rarity ranks.[1] Natural communities having a rank of 1-3 are generally considered sensitive, though some communities with other ranks may also be considered sensitive. (CDFW 2021). According to the CNDDB, riparian habitats that have been recorded in the City include the Los Angeles River and its tributaries, including the Pacoima Wash, Tujunga Wash, and Verdugo Wash. Most of the Los Angeles River supports minimal naturalized vegetation, especially in areas where the river channel is concrete lined.

[1] A conservation status rank (also known as "rarity rank") or a "high inventory priority" designation is used to determine the significance of project impacts to plant communities. The conservation status ranking system consists of a geographic scale (G=Global; S=State) and a degree of threat (1=critically imperiled; 2=imperiled; 3=vulnerable to extirpation or extinction; 4=apparently secure; and 5=demonstrably widespread, abundant, or secure). Plant community alliances with global or state conservation status ranks of G1 through G3, or S1 through S3, respectively, are considered to be "natural communities of special concern."

Other sensitive habitats listed by the CNDDB as having occurred in the City include: California walnut woodland [G2S2], Riversidian alluvial fan sage scrub [G1S1], southern California arroyo chub/Santa Ana sucker stream [Not Ranked], southern coast live oak riparian forest [G4S4], southern coastal bluff scrub [G1S1], southern coastal salt marsh [G2S2], southern cottonwood willow riparian forest [G3S3], southern dune scrub [G1S1], southern mixed riparian forest [G2S2], southern riparian scrub [G3S3], southern sycamore alder riparian woodland [G4S4], southern willow scrub [G3S2], valley needlegrass grassland [G3S3], valley oak woodland [G3S2], and walnut forest [G1S1]. Most of these occurrences are located in natural areas or areas that previously contained natural habitat and have since been developed. While the rezoning program will generally avoid sensitive natural communities, development accommodated by the Housing Element Update on sites already zoned residential may be sited in areas containing sensitive natural communities.

Wetlands, Streams, and Riparian Habitats

In accordance with Section 1602 of the CFGC, the CDFW has jurisdiction over lakes and streambeds (including adjacent riparian resources). CDFW regulates wetland areas that are part of a river, stream, or lake, but also temporary wetland features such as vernal pools. Under Section 404 of the Clean Water Act (CWA), the United States Army Corps of Engineers (USACE) has authority to regulate activities that discharge dredge or fill material into wetlands or other "waters of the United States" through issuance of a Section 404 Permit. Finally, the Regional Water Quality Control Board (RWQCB) has jurisdiction over "waters of the state" pursuant to the Porter-Cologne Water Quality Control Act and has the responsibility for review of the project water quality certification per Section 401 of the federal CWA.

Wetlands in the City are associated with springs, streams, rivers (e.g., Tujunga Wash) and lakes, as well as the Pacific Ocean (City of Los Angeles 2001). The largest coastal wetland, Ballona wetlands, is in the Westchester-Playa del Rey community (City of Los Angeles 2001). The Ballona wetlands is identified as a Significant Ecological Area (SEA) that provides approximately 153 acres of wetland habitat and 83 acres of non-wetland waters (CDFW 2017). Although portions of the wetland have been degraded, it still provides a variety of habitat types and is home to a variety of wildlife and plant species (CDFW 2017). The Venice Canal System, in the Venice community, is also an important part of the wetlands system as its canals connect to the Pacific Ocean (City of Los Angeles 2001). Soft-bottomed portions of the Los Angeles River provide wetland habitat, though they are degraded in many areas and dominated by non-native plant communities. Many other seasonal (e.g., stormwater impoundment areas), recreational (e.g., golf course), and permanent water bodies (e.g., Harbor Lake, Sepulveda Basin) that also provide wetland habitat are located throughout the City.

A riparian area consists of the transitional habitat between terrestrial and aquatic ecosystems. Specifically, riparian areas are the vegetated areas between a seasonal riverine feature and the outer drip line of the adjacent vegetation. There are countless drainages and naturalized portions of local waters (e.g., Los Angeles River and its tributary) within the City and surrounding foothills and mountains that support riparian habitat. Riparian habitat supports a unique set of physical and biological processes, including temperature regulation and wildlife habitat, and provides valuable aquatic food web services (inputs for nutrient cycling and food availability) to adjacent aquatic ecosystems. Riparian areas can be wetlands or non-wetland drainage areas. Well-incised drainages often support riparian vegetation including but not limited to coast live oak riparian forests, mulefat scrub, and southern willow scrub.

Significant Ecological Areas

The County of Los Angeles' Significant Ecological Area (SEA) Ordinance implements the goals and policies of the County's General Plan by establishing permitting requirements, design standards, and review processes for development within SEAs. The goal of the SEA Ordinance is to guide development to the least impactful areas on a property in order to avoid adverse impacts to biological resources. The level of SEA assessment is dependent on the area of disturbance, sensitivity of biological resources impacted, and consistency with Development Standards. The SEA Ordinance does not apply to areas within the incorporated City and does not include all sensitive areas (e.g., those listed by CDFW), just those regionally recognized by the County.

In the urban context of Los Angeles, SEAs support valuable habitat for plants and animals, and are often integral to the preservation of rare, threatened, or endangered species and the conservation of biological diversity. A number of SEAs are located within the City boundaries, including Ballona Creek, Tujunga Valley-Hansen Dam, and Chatsworth Reservoir Simi Hills, Encino Reservoir, Temescal-Rustic-Sullivan Canyons, Griffith Park, Terminal Island, and Verdugo Mountains (City of Los Angeles 2015).

Wildlife Corridors

Wildlife movement corridors are physical connections that allow wildlife to move between areas of suitable habitat in both undisturbed and fragmented landscapes. These can be critical at both the local and regional level and are necessary for wildlife to access essential resources for dispersal and migration to ensure the mixing of genes between populations, which is essential to maintain healthy ecological and evolutionary processes. Wildlife crossings are generally small, narrow areas allowing wildlife to pass through an obstacle or barrier, such as a roadway to reach another patch of habitat. Wildlife crossings include culverts, drainage pipes, underpasses, tunnels, and, more recently, crossings created specifically for wildlife

movement over highways. Examples of barriers or impediments to movement, i.e., access, include housing and other urban development, highways and roads, and fencing.

Areas that may facilitate wildlife movement in the City are generally located along rivers and creeks, as well as in mountainous and outer areas of the City, such as Santa Monica Mountains, Verdugo Hills, and Simi Hills. Those wildlife corridors on the borders of the City link to regional corridors, including but not limited to the San Gabriel Mountains/Angeles National Forest to the north and Topanga State Park to the west (Los Angeles County 2009). In addition, open space areas in the City that have large intact habitat (e.g., Trebek Open Space, Runyon Canyon Park, Stone Canyon Reservoir, Topanga Canyon, Griffith Park) provide suitable habitat for larger mobile wildlife (e.g., bobcat, mule deer, mountain lion). According to Cooper and Mathewson (2008) and Pratt (2014), Griffith Park supports populations of large mammals and at least one mountain lion (P-22). Regional habitat linkages and wildlife corridors include but are not limited to the Santa Monica Mountains SEA and Santa Susana Mountains – Simi Hills SEA.

The 225-acre Sepulveda Basin Wildlife Preserve is a designated wildlife area along the Los Angeles River, in the City. Key indicator species found in this area include a variety of mammals and birds, such as coyote, shrike, acorn woodpeckers, and California quail (City of Los Angeles 2017).

Infrastructure impediments (e.g., roads, railroads, dams, canals) and urban development (including housing developments) and/or agriculture can limit wildlife movement. Fragmentation of large habitat areas into small, isolated segments, reduces biological diversity, eliminates disturbance-sensitive species, restricts genetic flow between populations of organisms, and may eventually lead to the loss of local floral or faunal assemblages.

Protection Areas of Wildlife (PAWs) and Wildlife Movement Pathways (WMPs)

In April 2014, the City Council initiated a study to address wildlife habitat in the City. The Department of City Planning undertook an evaluation to identify important habitats, areas identified as PAWs, for sustaining wildlife and connectivity within the City. As described in *Protected Areas for Wildlife & Wildlife Movement Pathways* (ESA 2021), the County oversees large contiguous natural areas under the SEA Ordinance, but those areas do not include all important habitats for sustaining wildlife and connectivity within the City, such as fragmented habitat where diverse wildlife populations are known to persist (ESA 2021).

The report describes 44 PAWs and 54 WMPs that are crucial for maintaining and preserving the existing level of biological diversity found within the City and provides recommendations to evaluate the City's existing policies that protect biological resources and habitat connectivity as well as policies and regulations of other jurisdictions to determine best practices that should be considered to reduce the

impacts of urbanization on habitat and wildlife, conserve and enhance the ecological health and functions within PAWs and WMPs, and achieve no net loss of biological diversity within the City (ESA 2021).

4.3.2 REGULATORY FRAMEWORK

Federal

Federal Endangered Species Act (FESA)

The Federal Endangered Species Act (FESA) of 1973, as amended (16 U.S.C. 1531 et seq.), provides the regulatory framework for the protection of plant and animal species (and their associated critical habitats), which are formally listed, proposed for listing, or candidates for listing as endangered or threatened under the FESA. The FESA has four major components: (1) provisions for listing species; (2) requirements for consultation with the United States Fish and Wildlife Service (USFWS) and the National Marine Fisheries Service; (3) prohibitions against "taking" of listed species; and (4) provisions for permits that allow an incidental "take." The FESA also discusses recovery plans and the designation of critical habitat for listed species. Both the USFWS and the National Marine Fisheries Service share the responsibility for administration of the FESA. During the CEQA review process, each agency is given the opportunity to comment on the potential of a project to affect listed plants and animals.

FESA (16 United States Code [U.S.C.] 1531 et seq.) is implemented by USFWS through a program that identifies and provides for protection of various species of fish, wildlife, and plants deemed to be in danger of or threatened with extinction. As part of this regulatory act, FESA provides for designation of critical habitat, defined in FESA Section 3(5)(A) as specific areas within the geographical range occupied by a species where physical or biological features "essential to the conservation of the species" are found and that "may require special management considerations or protection." Critical habitat may also include areas outside the current geographical area occupied by the species that are nonetheless "essential for the conservation of the species."

The FESA also discusses recovery plans and the designation of critical habitat for listed species. Both the USFWS and the National Marine Fisheries Service share the responsibility for administration of the FESA. During the CEQA review process, each agency is given the opportunity to comment on the potential of a project's impacts to listed plants and animals and to ensure adequate protection of listed species that may be affected by the project.

Migratory Bird Treaty Act (MBTA)

All migratory bird species that are native to the United States or its territories are protected under the federal Migratory Bird Treaty Act (MBTA). The federal Migratory Bird Treaty Act (MBTA) prohibits any

person unless permitted by regulations, to "pursue, hunt, take, capture, kill, attempt to take, capture or kill, possess, offer for sale, sell, offer to purchase, purchase, deliver for shipment, ship, cause to be shipped, deliver for transportation, transport, cause to be transported, carry, or cause to be carried by any means whatever, receive for shipment, transportation or carriage, or export, at any time, or in any manner, any migratory bird, included in the terms of this Convention…for the protection of migratory birds…or any part, nest, or egg of any such bird" (16 U.S. Code 703).

The list of migratory birds protected by the MBTA includes nearly all bird species native to the United States. The statute was extended in 1974 to include parts of birds, as well as eggs and nests. Thus, it is illegal under the MBTA to take (including killing, capturing, selling, trading, and transport) protected migratory bird species without prior authorization by the Department of Interior U.S. Fish and Wildlife Service. Activities that result in removal or destruction of an active nest (a nest with eggs or young being attended by one or more adults) would violate the MBTA. While destruction of a nest by itself is not prohibited under the MBTA, nest destruction that results in the unpermitted take of migratory birds or their eggs, is illegal and fully prosecutable under the MBTA.

With respect to nesting birds, although the MBTA does not itself provide specific take avoidance measures, the United States Fish and Wildlife Service and California Department of Fish and Wildlife, over time, have developed a set of measures sufficient to demonstrate take avoidance, included during construction activities, which include conducting brush removal, tree trimming, building demolition and/or construction, or grading activities outside of the nesting season. California Department of Fish and Wildlife biologists have defined the nesting season is February 15 through August 31 (January 15 to August 31 for raptors). If other timing restrictions make it impossible to avoid the nesting season, prior to issuance of a grading, construction or building permit including demolition permit, the following measures are required as described below:

1. Vegetation removal activities shall be scheduled outside the nesting season (September 1 to February 14 for songbirds; September 1 to January 14 for raptors) to avoid potential impacts to nesting birds. This includes vegetation removal associated with on-going fuel modification activities.

2. Any construction activities or fuel modification activities that occur during the nesting season (February 15 to August 31 for songbirds; January 15 to August 31 for raptors) shall require that all suitable habitat be thoroughly surveyed for the presence or absence of nesting birds by a qualified biologist monitor (i.e., a professional biologist with a minimum of two years of avian survey experience or equivalent) before the commencement of clearing. If any active nests are detected, a buffer of at least 300 feet (500 feet for raptors), or as determined appropriate by the qualified

biologist monitor, shall be delineated, flagged, and avoided until the nesting cycle is complete as determined by the qualified biologist monitor.

Clean Water Act (CWA)

The United States Army Corps of Engineers (USACE), under provisions of Section 404 of the CWA and USACE implementing regulations, has jurisdiction over the placement of dredged or fill material into "waters of the United States." Congress enacted the CWA "to restore and maintain the chemical, physical, and biological integrity of the Nation's waters." In practice, the boundaries of certain waters subject to USACE jurisdiction under Section 404 have not been fully defined. Previous regulations codified in 1986 defined "waters of the United States" as traditional navigable waters, interstate waters, all other waters that could affect interstate or foreign commerce, impoundments of waters of the United States, tributaries, the territorial seas, and adjacent wetlands.

On April 21, 2020, the USACE and U.S. Environmental Protection Agency published the Navigable Waters Protection Rule to define "Waters of the United States." This rule, effective on June 22, 2020, defines four categories of jurisdictional waters, documents certain types of waters that are excluded from jurisdiction, and clarifies some regulatory terms. Under the Navigable Waters Protection Rule, "waters of the United States" include:

(1) Territorial seas and traditional navigable waters;
(2) Perennial and intermittent tributaries that contribute surface flow to those waters;
(3) Certain Lakes and ponds, and impoundments of jurisdictional waters, and;
(4) Wetlands adjacent to jurisdictional waters.

Tributaries are defined as "a river, stream, or similar naturally occurring surface water channel that contributes surface water flow to the territorial seas or traditional navigable waters in a typical year either directly or through one or more tributaries, jurisdictional lakes, ponds, and impoundments of jurisdictional waters, or adjacent wetlands." The tributary category also includes a ditch that "either relocates a tributary, is constructed in a tributary, or is constructed in an adjacent wetland as long as the ditch is perennial or intermittent and contributes surface water flow to a traditional navigable water or territorial sea in a typical year."

Adjacent wetlands are defined as wetlands that:

(i) Abut, meaning to touch at least at one point or side of, a defined Water of the U.S.;
(ii) Are inundated by flooding from a defined Water of the U.S. in a typical year;

(iii) Are physically separated from a defined Water of the U.S. by a natural berm, bank, dune, or similar natural features or by artificial dike, barrier or similar artificial structures as long as direct hydrological surface connection to defined Waters of the U.S. are allowed; or,

(iv) Are impounded of Waters of the U.S. in a typical year through a culvert, flood or tide gate, pump or similar artificial structure.

The Navigable Waters Protection Rule states that the following areas not considered to be jurisdictional waters even where they otherwise meet the definitions described above:

(1) Groundwater, including groundwater drained through subsurface drainage systems;

(2) Ephemeral features that flow only in direct response to precipitation including ephemeral streams, swales, gullies, rills and pools;

(3) Diffuse stormwater runoff and directional sheet flow over uplands;

(4) Ditches that are not defined Waters of the U.S. and not constructed in adjacent wetlands subject to certain limitations;

(5) Prior converted cropland;

(6) Artificially irrigated areas that would revert to upland if artificial irrigation ceases;

(7) Artificial lakes and ponds that are not jurisdictional impoundments and that are constructed or excavated in upland or non-jurisdictional waters;

(8) Water-filled depressions constructed or excavated in upland or in non-jurisdictional waters for the purpose of obtaining fill, sand, or gravel;

(9) Stormwater control features constructed or excavated in uplands or in non-jurisdictional water to convey, treat, infiltrate, or stormwater run-off;

(10) Groundwater recharge, water reuse, and wastewater recycling structures constructed or excavated in upland or in non-jurisdictional waters; and,

(11) Waste treatment systems.

USACE jurisdictional limits are typically identified by the Ordinary High Water Mark (OHWM) or the landward edge of adjacent wetlands (where present). The OHWM is the "line on the shore established by the fluctuations of water and indicated by physical characteristics such as a clear, natural line impressed on the bank, shelving, changes in the character of soil, destruction of terrestrial vegetation, the presence of litter and debris, or other appropriate means that consider the characteristics of the surrounding area" (33 CFR 328.3).

The USACE defines wetlands as "those areas that are inundated or saturated by surface or groundwater at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions" (33 CFR 328.3). The USACE's delineation procedures identify wetlands in the field based on indicators of three wetland parameters: hydrophytic vegetation, hydric soils, and wetland hydrology.

State

California Endangered Species Act (CESA)

Under the CESA (Cal. Fish and Game Code, §§ 2050–2085), the term endangered species is defined as a species of plant, fish, or wildlife that is "in serious danger of becoming extinct throughout all, or a significant portion of, its range," and is limited to species or subspecies native to California. The CESA prohibits the take (hunt, pursuit, catch, capture, kill, or attempt to hunt, pursue, catch, capture, or kill) of listed species except as otherwise provided in state law. Unlike its federal counterpart, the CESA also applies the take prohibitions to species petitioned for listing (state candidates). The CDFW is responsible for administration of the CESA. For projects that affect both a State and federal listed species, compliance with the FESA will satisfy the CESA if the CDFW determines that the federal incidental take authorization is consistent with the CESA. Projects that result in a take of a California listed species require a take permit under the CESA. The federal and State acts lend protection to species that are considered rare enough by the scientific community and trustee agencies to warrant special consideration, particularly with regard to protection of isolated populations, nesting or den locations, communal roosts, and other essential habitat. Unlike the FESA, the CESA prohibits the take of not just listed endangered or threatened, but also candidate species (species petitioned for listing).

The CESA defines an endangered species as:

> …a native species or subspecies of a bird, mammal, fish, amphibian, reptile, or plant which is in serious danger of becoming extinct throughout all, or a significant portion, of its range due to one or more causes, including loss of habitat, change in habitat, overexploitation, predation, competition, or disease.

A threatened species is defined as:

> …a native species or subspecies of a bird, mammal, fish, amphibian, reptile, or plant that, although not presently threatened with extinction, is likely to become an endangered species in the foreseeable future in the absence of the special protection and management efforts required by this chapter. Any animal determined by the commission as rare on or before January 1, 1985 is a threatened species.

Candidate species are defined as:

> …a native species or subspecies of a bird, mammal, fish, amphibian, reptile, or plant that the commission has formally noticed as being under review by the department for addition to either the list of endangered species or the list of threatened species, or a species for which the commission has published a notice of proposed regulation to add the species to either list.

Candidate species may be afforded temporary protection as though they were already listed as threatened or endangered at the discretion of the Fish and Game Commission. Unlike the FESA, CESA does not include listing provisions for invertebrate species. Article 3, Sections 2080 through 2085, of the CESA addresses the taking of threatened or endangered species by stating:

> …no person shall import into this State, export out of this State, or take, possess, purchase, or sell within this State, any species, or any part or product thereof, that the commission determines to be an endangered species or a threatened species, or attempt any of those acts, except as otherwise provided.

Under the CESA, "take" is defined as, "hunt, pursue, catch, capture, or kill, or attempt to hunt, pursue, catch, capture, or kill." Additionally, some sensitive mammals and birds are protected by the state as Fully Protected Mammals or Fully Protected Birds, as described in the CFGC, Sections 4700 and 3511, respectively.

Fully Protected Species Act

California Fish and Game Code Sections 3511, 4700, 5050 and 5515 designate 37 species of wildlife as Fully Protected in California. The classification of Fully Protected provides additional protection to those animals that are rare or face possible extinction. Most Fully Protected Species have also been listed as threatened or endangered species under CESA. Fully Protected species may not be taken or possessed at any time and no licenses or permits may be issued for their take except for collecting these species for necessary scientific research and relocation of the bird species for the protection of livestock.

Bird Protections - California Fish and Game Code (CFGC)

According to CFGC Section 3503 it is unlawful to take, possess, or needlessly destroy the nest or eggs of any bird [except English sparrows (*Passer domesticus*) and European starlings (*Sturnus vulgaris*)]. Sections 3503 and 3513 prohibit the taking of any birds in the orders of *Falconiformes* or *Strigiformes* (birds of prey) or to take, possess, or destroy their nests or eggs. Section 3513 essentially overlaps with the federal MBTA, prohibiting the take or possession of any migratory nongame bird. Disturbance that causes nest abandonment and/or loss of reproductive effort is considered "take" by CDFW.

California Native Plant Protection Act (NPPA)

The NPPA was enacted in 1977 and allows the Fish and Game Commission to designate plants as rare or endangered. The NPPA prohibits take of endangered or rare native plants but includes some exceptions for agricultural and nursery operations; emergencies; and after properly notifying CDFW for vegetation removal from canals, roads, and other sites, changes in land use, and in certain other situations. Effective in 2015, CDFW promulgated regulations (14 CCR 786.9) under the authority of the NPPA, establishing that the CESA permitting procedures (CFG Code Section 2081) would be applied to plants listed under the NPPA as "Rare." With this change, there is little practical difference for the regulated public between plants listed under CESA and those listed under the NPPA.

Santa Monica Mountains Conservancy Act.

The Santa Monica Mountains Conservancy Act (Public Resources code Sections 33000 - 33215) was enacted in 1979 by AB 1312. The act established the Santa Monica Mountains Conservancy. The conservancy's mission is to strategically buy back, preserve, protect, restore, and enhance treasured pieces of Southern California to form an interlinking system of urban, rural and river parks, open space, trails, and wildlife habitats that are easily accessible to the general public. The conservancy aims to preserve, protect, and enhance the open spaces in the mountains within Los Angeles and Ventura counties with a guiding principle of maintaining a network of cross-freeway habitat linkages and wildlife corridors that keep the mountain ranges biologically inter-connected and provide enough habitat to support larger mammals.

Regional Water Quality Control Board Jurisdiction

The California State Water Resources Control Board (SWRCB) and the RWQCB maintain regulatory responsibility for management of wetlands and waterbodies in California and may review wetland delineations in concert with the USACE under Section 401 of the Clean Water Act.

Together the SWRCB and Los Angeles RWQCB have jurisdiction over "waters of the State," (WOS) which are defined as any surface water or groundwater, including saline waters, within the boundaries of the state. The SWRCB or local RWQCB have not established regulations for field determinations of waters of the state except for wetlands currently. The RWQCB are affected by or shares USACE jurisdiction unless isolated conditions or ephemeral waters are present. Each local RWQCB may delineate their jurisdictions of waters of the state differently based on current interpretations of jurisdiction.

Procedures for defining RWQCB jurisdiction pursuant to the SWRCB's *State Wetland Definition and Procedures for Discharges of Dredged or Fill Material to Waters of the State* went into effect May 28, 2020. The SWRCB define an area as wetland if, under normal circumstances:

(i) the area has continuous or recurrent saturation of the upper substrate caused by groundwater, or shallow surface water, or both;

(ii) the duration of such saturation is sufficient to cause anaerobic conditions in the upper substrate; and

(iii) the area's vegetation is dominated by hydrophytes or the area lacks vegetation.

The SWRCB's *Implementation Guidance for the Wetland Definition and Procedures for Discharges of Dredge and Fill Material to Waters of the State* (2020), states that waters of the U.S. and waters of the State should be delineated using the standard USACE delineation procedures, taking into consideration that the methods shall be modified only to allow for the fact that a lack of vegetation does not preclude an area from meeting the definition of a wetland.

Porter-Cologne Water Quality Control Act

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

- The quality of all the waters of the State shall be protected
- All activities and factors affecting the quality of water shall be regulated to attain the highest water quality within reason
- The State must be prepared to exercise its full power and jurisdiction to protect the quality of water in the State from degradation

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

Contaminated groundwater that is proposed to be discharged to surface waters or to a publicly owned treatment works would be subject to the applicable provisions of the Clean Water Act, including permitting and possibly pretreatment requirements. A National Pollutant Discharge Elimination System permit is

required to discharge pumped groundwater to surface waters, including local storm drains, in accordance with California Water Code Section 13260.

California Department of Fish and Wildlife

Stream and Riparian Habitat

Pursuant to California Fish and Game Code Section 1600, CDFW has authority over all perennial, intermittent, and ephemeral rivers, streams, and lakes in the state, and requires any person, state or local governmental agency, or public utility to notify the CDFW before beginning any activity that would "substantially divert or obstruct the natural flow of, or substantially change or use any material from the bed, channel, or bank of, any river, stream, or lake, or deposit or dispose of debris, waste, or other material containing crumbled, flaked, or ground pavement where it may pass into any river, stream, or lake" that supports fish or wildlife resources.

A stream is defined as a "body of water that flows at least periodically or intermittently through a bed or channel having banks and supports fish or other aquatic life. This includes watercourses having a surface or subsurface flow that supports or has supported riparian vegetation" (California Code of Regulations, Title 14 §1.72). A Lake or Streambed Alteration Agreement may be required for any Proposed Project that would result in an adverse impact to a river, stream, or lake. CDFW jurisdiction typically extends to the top of the bank and out to the outer edge of adjacent riparian vegetation if present. However, CDFW can take jurisdiction over a body of flowing water and the landform that conveys it, including water sources and adjoining landscape elements that are byproducts of and affected by interactions with flowing water without regard to size, duration, or the timing of flow (Brady and Vyverberg 2013).

Special-Status Wildlife Protection

Special Animal

Special-status wildlife species are those species included on the CDFW "Special Animals" list (CDFW, April 2021). "Special Animal" is a general term that refers to all of the taxa the CNDDB is interested in tracking, regardless of their legal or protection status. The CDFW considers the taxa on this list to be those of greatest conservation need. The species on this list generally fall into one or more of the following categories:

- Officially listed or proposed for listing under the State and/or Federal Endangered Species Acts.
- State or Federal candidate for possible listing.
- Taxa that meet the criteria for listing, even if not currently included on any list, as described in
- Section 15380 of the California Environmental Quality Act Guidelines.
- Taxa considered by the Department to be a Species of Special Concern.

- Taxa that are biologically rare, very restricted in distribution, declining throughout their range, or have a critical vulnerable stage in their life cycle that warrants monitoring.
- Populations in California that may be on the periphery of a taxon's range but are threatened with extirpation in California.

CDFW Species of Special-Concern

A Species of Special Concern (SSC) is a species, subspecies, or distinct population of an animal native to California that currently satisfies one or more of the following (not necessarily mutually exclusive) criteria:

- Is extirpated from the State or, in the case of birds, is extirpated in its primary season or breeding role;
- Is listed as Federally-, but not State-, threatened or endangered; meets the State definition of threatened or endangered but has not formally been listed;
- Is experiencing, or formerly experienced, serious (noncyclical) population declines or range retractions (not reversed) that, if continued or resumed, could qualify it for State threatened or endangered status;
- Has naturally small populations exhibiting high susceptibility to risk from any factor(s), that if realized, could lead to declines that would qualify it for State threatened or endangered status.

It is the goal and responsibility of CDFW to maintain viable populations of all native species. To this end, CDFW has designated certain vertebrate species as SSC because declining population levels, limited ranges, and/or continuing threats have made them vulnerable to extinction. The goal of designating SSCs is to halt or reverse their decline by calling attention to their plight and addressing the issues of concern early enough to secure their long-term viability. Not all SSCs have declined equally; some species may be just starting to decline, while others may have already reached the point where they meet the criteria for listing as a threatened or endangered under state and/or federal endangered species acts.

Special-Status Plant Protection

Special Plant

"Special Plants" is a broad term used to refer to all the plant taxa inventoried by the CDFW's CNDDB, regardless of their legal or protection status. Special Plants include vascular plants as well as high priority bryophytes (mosses, liverworts, and hornworts) and lichens. Special Plant taxa are species, subspecies, or varieties that fall into one or more of the following categories. Not all plants within each category are necessarily tracked as Special Plants but these categories are often used as a starting point when determining which plants are tracked by the CNDDB:

- Officially listed by California or the Federal Government as Endangered, Threatened, or Rare;
- A candidate for state or federal listing as Endangered, Threatened, or Rare;
- Taxa listed in the California Native Plant Society's Inventory of Rare and Endangered Plants of California;
- Taxa which meet the criteria for listing, even if not currently included on any list, as described in Section 15380 of the California Environmental Equality Act (CEQA) Guidelines; these taxa may indicate "None" under listing status, but note that all California Rare Plant Rank 1 and 2 and some Rank 3 and 4 plants may fall under Section 15380 of CEQA;
- Taxa that are biologically rare, very restricted in distribution, or declining throughout their range but not currently threatened with extirpation;
- A Bureau of Land Management, U.S. Fish and Wildlife Service, or U.S. Forest Service Sensitive Species/Species of Conservation Concern;
- Population(s) in California that may be peripheral to the major portion of a taxon's range but are threatened with extirpation in California; and
- Taxa closely associated with a habitat that is declining in California at a significant rate (e.g. wetlands, riparian, vernal pools, old growth forests, desert aquatic systems, native grasslands, valley shrubland habitats, etc.).

NatureServe Element Ranking for Plants

The CNDDB uses a ranking methodology maintained and periodically revised by NatureServe. It includes a Global rank (G rank), describing the rank for a given taxon over its entire distribution and a State rank (S rank), describing the rank for the taxon over its state distribution. For subspecies and varieties, there is also a "T" rank describing the global rank for the subspecies or variety. The next section of this document details the criteria used to assign element ranks, from G1 to G5 for the Global rank and from S1 to S5 for the State rank, as described below:

- G1 - Critically imperiled; at very high risk of extinction or elimination due to very restricted range, very few populations or occurrences, very steep declines, very severe threats, or other factors.
- G2 - Imperiled; at high risk of extinction or elimination due to restricted range, few populations or occurrences, steep declines, severe threats, or other factors.
- G3 - Vulnerable; at moderate risk of extinction or elimination due to a fairly restricted range, relatively few populations or occurrences, recent and widespread declines, threats, or other factors.

- G4 - Apparently secure; at fairly low risk of extinction or elimination due to an extensive range and/or many populations or occurrences, but with possible cause for some concern as a result of local recent declines, threats, or other factors.
- G5 - Secure; at very low risk of extinction or elimination due to a very extensive range, abundant populations or occurrences, and little to no concern from declines or threats
- S1 - Critically imperiled; at very high risk of extirpation in the jurisdiction due to very restricted range, very few populations or occurrences, very steep declines, severe threats, or other factors.
- S2 - Imperiled; at high risk of extirpation in the jurisdiction due to restricted range, few populations or occurrences, steep declines, severe threats, or other factors.
- S3 - Vulnerable; at moderate risk of extirpation in the jurisdiction due to a fairly restricted range, relatively few populations or occurrences, recent and widespread declines, threats, or other factors.
- S4 - Apparently secure; at a fairly low risk of extirpation in the jurisdiction due to an extensive range and/or many populations or occurrences, but with possible cause for some concern as a result of local recent declines, threats, or other factors.
- S5 - Secure; at very low or no risk of extirpation in the jurisdiction due to a very extensive range, abundant populations or occurrences, with little to no concern from declines or threats.

California Rare Plant Ranks

The California Rare Plant Rank (CRPR) status applies to plants only. The CRPRs are a ranking system originally developed by the CNPS to better define and categorize rarity in California's flora. All plants tracked by the CNDDB are assigned to a CRPR category. These categories are:

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

In addition, the CRPR use a decimal-style threat rank. The threat rank is an extension added onto the CRPR and designates the level of threats by a 1 to 3 ranking with 1 being the most threatened and 3 being the least threatened. Most CRPRs read as 1B.1, 1B.2, 1B.3, etc. Note that some Rank 3 plants do not have a threat

code extension due to difficulty in ascertaining threats for these species. Rank 1A and 2A plants also do not have threat code extensions since there are no known extant populations of the plants in California.

Local

LAMC Sec. 64.72 Stormwater Pollution Control Measures for Development Planning and Construction Activities Ordinance

Through LAMC Section 64.72, the City of Los Angeles has established Low Impact Development (LID) Ordinance which includes practices and standards that aim to mitigate stormwater pollution and maximize open, green, and pervious areas on all new developments or redevelopments. The LID Ordinance requires developments of any kind to comply with the Development Best Management Practices Handbook. The Lid Ordinance also requires all development to be designed to manage and capture stormwater runoff to the maximum extent feasible. Suggested practices, in priority order, include infiltration, evapotranspiration, and capture and use, treated through high removal efficiency biofiltration/biotreatment systems.

City of Los Angeles General Plan Framework, Open Space and Conservation Elements

The Citywide General Plan Framework Element (Framework Element) is intended to guide the City's long-range growth and development. In general, the City of Los Angeles' General Plan (including the Framework, Open Space, and Conservation Elements, and other Elements) and the City of Los Angeles' Green New Deal (Sustainable pLAn 2019) contain policies and programs for the protection of the environment and biological resources. The Open Space Element includes goals, objectives, and policies for the provision, management, and conservation of the City's open space resources, including SEAs, wildlife corridors, and natural animal ranges.

The Conservation Element addresses endangered species, habitats, wildlife corridors, and wetlands occurring in the City and identifies policies intended to protect, restore, and enhance these biological resources. Relevant goals, objectives, and policies from the Framework and Conservation Elements related to biological resources are listed below. These documents serve to provide additional critical guidance for the betterment of public health for the region and City.

<u>Framework Element</u>

Goal 6A: An integrated Citywide/regional public and private open space system that serves and is accessible by the City's population and is unthreatened by encroachment from other land uses

Objective 6.1: Protect the City's natural settings from the encroachment of urban development, allowing for the development, use, management, and maintenance of each component of the City's natural resources to contribute to the sustainability of the region.

Policy 6.1.1: Consider appropriate methodologies to protect significant remaining open spaces for resource protection and mitigation of environmental hazards, such as flooding, in and on the periphery of the City, such as the use of tax incentives for landowners to preserve their lands, development rights exchanges in the local area, participation in land banking, public acquisition, land exchanges and Williamson Act contracts.

Policy 6.1.2: Coordinate City operations and development policies for the protection and conservation of open space resources, by:

- Encouraging City departments to take the lead in utilizing water re-use technology, including graywater and reclaimed water for public landscape maintenance purposes and such other purposes as may be feasible;
- Preserving habitat linkages, where feasible, to provide wildlife corridors and to protect natural animal ranges; and
- Preserving natural viewsheds, whenever possible, in hillside and coastal areas.

Policy 6.1.3: Reassess the environmental importance of the County of Los Angeles designated Significant Ecological Areas (SEAs) that occur within the City of Los Angeles and evaluate the appropriateness of the inclusion of other areas that may exhibit equivalent environmental value.

Policy 6.1.4: Conserve, and manage the undeveloped portions of the City's watersheds, where feasible, as open spaces which protect, conserve and enhance natural resources.

Policy 6.1.5: Provide for an on-site evaluation of sites located outside of the targeted growth areas, as specified in amendments to the community plans, for the identification of sensitive habitats, sensitive species, and an analysis of wildlife movement, with specific emphasis on the Framework Element's Technical Background Report and Environmental Impact Report.

Policy 6.1.6: Consider preservation of private land open space to the maximum extent feasible. In areas where open space value determine the character of the community, development should occur with special consideration of these characteristics.

Policy 6.1.7: Encourage an increase of open space where opportunities exist throughout the City to protect wild areas such as the Sepulveda Basin and Chatsworth Reservoir.

Conservation Element – Endangered Species

Policy 1: Continue to require evaluation, avoidance, and minimization of potential significant impacts, as well as mitigation of unavoidable significant impacts of sensitive animal and plant species and their habitats and habitat corridors relative to land development activities.

Policy 2: Continue to administer City-owned and managed properties so as to protect and/or enhance the survival of sensitive plant and animal species to the greatest practical extent.

Policy 3: Continue to support legislation that encourages and facilitates protection of endangered, threatened, sensitive and rare species and their habitats and habitat

Conservation Element – Habitat

Policy 1: Continue to identify significant habitat areas, corridors and buffers and to take measures to protect, enhance and/or restore them.

Policy 2: Continue to protect, restore, and/or enhance habitat areas, linkages and corridor segments, to the greatest extent practical, within City owned or managed sites.

Policy 3: Continue to work cooperatively with other agencies and entities in protecting local habitats and endangered, threatened, sensitive, and rare species.

Policy 4: Continue to support legislation that encourages and facilitates protection of local native plant and animal habitats.

Protected Trees

According to Articles 2 and 7 of Chapter I, Article 6 of Chapter IV, and Section 96.303.5 of the City's Municipal Code and City Ordinance No. 186873 (Protected Tree Ordinance, City of Los Angeles 2021), any of the following Southern California indigenous tree species, which measure four inches or more in cumulative diameter, four and one-half feet above the ground level at the base of the tree, or any of the following Southern California indigenous shrub species, which measure four inches or more in cumulative diameter, four and one-half feet above the ground level at the base of the shrub: valley oak (*Quercus lobata*), California live oak (*Quercus agrifolia*), or any other Quercus sp. tree indigenous to California, except for scrub oak (*Quercus berberidifolia*); southern California black walnut (*Juglans californica var. californica*); western sycamore (*Platanus racemosa*); and California bay (*Umbellularia californica*). Protected shrubs include Mexican elderberry (*Sambucus mexicana*) and toyon (*Heteromeles arbutifolia*).

Heritage Trees

Heritage trees are individual trees of any size or species that are specially designated by the Los Angeles Department of Recreation and Parks (RAP) as "heritage" because of their historical, commemorative, or horticultural significance. The nomination and determination of heritage trees is an internal process within RAP. Nominations are generally made by RAP staff members or community members.

The City of Los Angeles maintains an inventory of heritage trees that the City intends to maintain and preserve on City properties, including parks. The list of heritage trees can be viewed on NavigateLA on the City's RAP website. The list of heritage trees remains open for new designations and provides information to RAP staff regarding the importance of their actions while planning activities near heritage trees.

Los Angeles River Revitalization Master Plan

The City of Los Angeles adopted the Los Angeles River Revitalization Master Plan (LARRMP) in 2007 with the goal of restoring the ecological and hydrological functioning of the river, through the recreation of a riparian habitat corridor in the channel, and through the removal of concrete walls where feasible. This would help restore a continuous, functioning riparian ecosystem that supports vegetation as well as birds and mammals, and developing fish passages, fish ladders, and riffle pools (City of Los Angeles 2007).

Development and implementation of the Revitalization Master Plan would maintain the river as a resource that provides flood protection and opportunities for recreational and environmental enhancement, as well as intend to improve the aesthetics of the region, enrich the quality of life for residents, and help sustain the economy of the region. Goals of the plan include:

- Establishing environmentally sensitive urban design guidelines, land use guidelines, and development guidelines for the River zone that would create economic development opportunities to enhance and improve River-adjacent communities by providing open space, housing, retail spaces such as restaurants and cafes, educational facilities, and places for other public institutions.
- Improving the environment, enhancing water quality, improving water resources, and improving the ecological functioning of the River.
- Providing public access to the River.
- Providing significant recreation space and open space, new trails, and improve natural habitats to support wildlife.
- Preserving and enhancing the flood control features of the River.
- Fostering growth in community awareness of the Los Angeles River, and pride in the Los Angeles River

River Implementation Overlay

The River Implementation Overlay (RIO) is a Citywide zoning ordinance (No. 183,145) that applies to properties in close proximity to the Los Angeles River. Per LAMC Section 13.17(a), the purposes of the ordinance include but are not limited to: supporting the goals of the LARRMP, contributing to the environmental and ecological health of the City's watersheds, and providing a native habitat and supporting local species. Specific references are made in the ordinance to the LARRMP's native landscaping guidelines.

Local Coastal Programs

Venice Coastal Zone Specific Plan

The City of Los Angeles does not have a certified Local Coastal Program for the Venice community, but the City has adopted the Venice Coastal Zone Specific Plan. This Specific Plan consists of land use plans, zoning ordinances, zoning district maps, and other implementing actions intended to implement the provisions and policies of the California Coastal Act at the local level. The Specific Plan is predominantly a land use plan, but it also addresses water and marine resource issues relating to regulation of storm water runoff, tidal circulation, and protection and enhancement of environmentally sensitive habitat areas within the Venice Coastal Zone (City of Los Angeles 1999).

San Pedro Local Coastal Program

The City of Los Angeles does not have a certified Local Coastal Program for the San Pedro community, but the City has adopted the San Pedro Coastal Land Use Plan and the San Pedro Specific Plan. The San Pedro Specific Plan and the San Pedro Coastal Land Use Plan contain land use and development regulations to protect, maintain, enhance, and restore the overall quality of the San Pedro Coastal Zone while meeting provisions of the California Coastal Act (City of Los Angeles 2013)

Los Angeles City Fire Department (LAFD) Brush Clearance Requirements

According to Chapter 49 of the California Fire Code (Section 4906.3), which regulates hazardous vegetation and fuel management:

Hazardous vegetation and fuels around all applicable buildings and structures shall be maintained in accordance with the following laws and regulations:

1. **Public Resources Code, Section 4291.** "Maintain defensible space of 100 feet from each side and from the front and rear of the structure… The amount of fuel modification necessary shall take into account the flammability of the structure as affected by building material, building standards,

location, and type of vegetation. Fuels shall be maintained in a condition so that a wildfire burning under average weather conditions would be unlikely to ignite the structure."

2. **California Code of Regulations, Title 14, Division 1.5, Chapter 7, Subchapter 3, Section** 1299 (see guidance for implementation "General Guideline to Create Defensible Space"). "(A) Dead and dying woody surface fuels and aerial fuels shall be removed. Loose surface litter, normally consisting of fallen leaves or needles, twigs, bark, cones, and small branches, shall be permitted to a maximum depth of three inches (3 in.). (B) Cut annual grasses and forbs down to a maximum height of four inches (4 in.). (C) All exposed wood piles must have a minimum of ten feet (10 ft.) of clearance, down to bare mineral soil, in all directions."

3. **California Code of Regulations, Title 19, Division 1, Chapter 1, Subchapter 1, Section 3.07.** "(1) Maintain around and adjacent to such building or structure a firebreak made by removing and clearing away, for a distance of not less than 30 feet on each side thereof or to the property line, whichever is nearer, all flammable vegetation or other combustible growth. This section does not apply to single specimens of trees, ornamental shrubbery, or similar plants which are used as ground cover, if they do not form a means of rapidly transmitting fire from the native growth to any building or structure. (2) Maintain around and adjacent to any such building or structure additional fire protection or firebreak made by removing all bush, flammable vegetation, or combustible growth which is located from 30 feet to 100 feet from such building or structure or to the property line, whichever is nearer, as may be required by the enforcing agency if he finds that, because of extra hazardous conditions, a firebreak of only 30 feet around such building or structure is not sufficient to provide reasonable fire safety. Grass and other vegetation located more than 30 feet from such building or structure and less than 18 inches in height above the ground may be maintained where necessary to stabilize the soil and prevent erosion."

These codes require fuel management and maintenance of defensible space, particularly in Very High Fire Hazard Severity Zones as well as adjacent to existing structures. The codes do not provide exceptions to fuel modification requirements for the purposes of maintaining habitat around protected trees or sensitive habitat. These requirements for fuel management include trees, as well as shrubs and grasses.

Los Angeles County SEAs

Per the County of Los Angeles Significant Ecological Area Ordinance (Section 22.14.190). The SEA Ordinance implements the goals and policies of the County General Plan by establishing permitting requirements, design standards, and review processes for development within SEAs. The goal of the SEA Ordinance is to guide development to the least impactful areas on a property in order to avoid adverse

impacts to biological resources. The level of SEA assessment is dependent on the area of disturbance, sensitivity of biological resources impacted, and consistency with Development Standards. SEAs located within the City boundaries include: Ballona Creek, Tujunga Valley-Hansen Dam, and Chatsworth Reservoir Simi Hills, Encino Reservoir, Temescal-Rustic-Sullivan Canyons, Griffith Park, Terminal Island, and Verdugo Mountains (City of Los Angeles 2015).

4.3.3 ENVIRONMENTAL IMPACTS

Thresholds of Significance

Thresholds of significance are based on the questions in Appendix G of the CEQA Guidelines. Biological resource impacts that may result from implementation of the Housing Element Update and the Safety Element Update would be significant if the project would:

- **Threshold 4.3-1:** Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service
- **Threshold 4.3-2**: 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 US Fish and Wildlife Service
- **Threshold 4.3-3** Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites)
- **Threshold 4.3-4:** Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance

Methodology

The impact analysis considers the indirect impacts from housing development accommodated under the Housing Element Update and policies and programs of the Safety Element Update to special status species and sensitive natural communities under the threshold questions in Appendix G. The analysis of biological resource impacts was based on review of applicable biological resource databases, plans and policies, as described in the Setting, above, as well as review of aerial photography such as Google Earth and aforementioned online database mappers.

For purposes of this analysis, "special-status species" include:

- Plants and wildlife species listed as rare, threatened, or endangered under the FESA or the CESA;
- Species that are candidates for listing under federal or state law;
- Species designated by the USFWS as proposed or candidates for listing and/or species designated as Species of Special Concern by CDFW;
- Species protected by MTBA;
- Species identified as rare, threatened, or endangered by CNPS (CRPR 1b and 2b); and
- Any other species that may be considered endangered or rare pursuant to CEQA Guidelines Section 15380(b).

Impacts to biological resources could include the direct take of a special-status species or the removal or disturbance of habitats from future development or more indirect delayed or secondary effects from future development, such as fragmentation, pollination interruption, plant and wildlife dispersal interruption, increased risk of fire, and increased invasion of non-native animals and plants that out-compete natives (refer to discussion under Impact 4.3-1, below).

Impacts to riparian habitat or other sensitive natural communities are described under Impact 4.3-2 and 4.3-4, below. For the purpose of this analysis, "sensitive natural communities" are considered to be habitats or natural communities that are unique, of relatively limited distribution in the region, and/or of particularly high value for wildlife. Sensitive habitats include specific natural communities defined by CDFW, as well as wetlands and riparian communities, which are considered special status natural communities due to their limited distribution in California. SEAs support sensitive natural communities.

Wildlife Movement

The movement and migration of wildlife species has been substantially altered due to habitat fragmentation over the past century. This fragmentation has most commonly been caused by development, which can result in large patches of land becoming inaccessible for habitat purposes, forming barriers between habitats, or resulting in roads which, although narrow, may result in barriers to smaller or less mobile wildlife species. Habitat fragmentation results in isolated islands of habitat, resulting in affects to wildlife behavior, foraging activity, reproductive patterns, immigration and emigration or dispersal capabilities, and survivability. Wildlife corridors play an important role in countering habitat fragmentation. the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery.

Potential for wildlife movement corridors to occur within or be crossed by the Proposed Project is identified above. In addition to a review of City plans and policies, and SEA mapping completed by the County, studies to better understand relationships between animal populations, open space reserves, and natural movement patterns in Los Angeles County were reviewed as part of the analysis. These studies include but are not limited to:

- Protected Areas for Wildlife & Wildlife Movement Pathways, Final Report (ESA 2021)
- South Coast Missing Linkages Project: A Linkage Design for the Santa Monica Mountains Sierra Madre Connection (Penrod, K. et. al., 2006)
- California Essential Connectivity Project: A Strategy for Conserving a Connected California (Spencer et al., February 2010)

Impacts to wildlife movement and nursery sites is discussed under Impact 4.3-3.

Urban Tree Canopy

For the purposes of this report, the urban tree canopy (UTC) refers to the layer of tree leaves, branches, and stems that provide tree coverage of the ground when viewed from above. More specifically, in this report UTC refers to the canopy of trees that are not associated riparian habitat (i.e., not reliant upon waters from surface or subsurface flow associated with naturalized or urban watercourses or contiguous with vegetation along said watercourses). Impacts to UTC is discussed under Impact 4.3-2.

Policy Assumptions

As discussed in Section 3, *Project Description*, the Housing Element Update is a policy document that provides a framework for meeting the City's housing needs. The purpose of the Housing Element Update is to comply with State housing element law requiring the City to show it has adequate land designated to accommodate the existing and projected housing needs reflected in the City's RHNA, which is based on the regional population forecasts. The purpose of the Safety Element Update is to achieve compliance with State, regional and local policies and guidelines. The targeted amendments will incorporate data and maps, address vulnerability to climate change; incorporate policies and programs from the City's updates to the Local Hazard Mitigation Plan and the Floodplain Management Plan.

The assumptions relied on for the analysis in this section are that any new or intensified allowance for residential development as a result of the Rezoning Program completed under the Proposed Project would primarily occur on infill development sites with proximity to public transportation and jobs, or in higher resource areas. Nonetheless, a discussed in Section 3, *Project Description*, residential development or that is, build out of the RHNA, could occur in any area where the current zoning permits residential uses (see

Figures 3-6 and 3-7) or as part of the Rezoning Program, including lower density residential sites . Based on this, the potential for development to occur within or adjacent to areas that may support biological resources is analyzed below.

Project Impacts and Mitigation Measures

Threshold 4.3-1	Would the Proposed 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 Wildlife or U.S. Fish and Wildlife Service?

Impact 4.3-1 Policies and programs of the Safety Element Update would not adversely impact special-status species or their habitat; therefore, impacts related to the Safety Element Update would be ***less than significant***. Housing development accommodated under the Housing Element could potentially adversely impact special-status species or their habitat. Compliance with existing laws and regulations and implementation of Mitigation Measures 4.3-1(a) through 4.3-1(d) would reduce potential impacts; nonetheless, such impacts would be ***significant and unavoidable***.

As discussed above under the *Environmental Setting* above, urbanization has substantially reduced the abundance and diversity of biological resources in Los Angeles, particularly in the central and southern portions of the City. Nevertheless, habitat types that remain in the City are limited, but diverse. These habitats include but are not limited to chaparral and coastal scrub covered hillsides, valley grasslands, and riparian areas that support oak, sycamore, and walnut woodlands. Special-status species have the potential to occur in throughout these natural areas.

Housing development accommodated under the Housing Element Update may occur in these natural areas. The CNDDB for the City of Los Angeles identifies 130 sensitive plants and wildlife species that have been documented within the City of Los Angeles, nearly all of which are historic occurrences in habitat that has since been developed (Appendix E). However, 13 federally- and/or state-designated threatened and endangered species, and another 11 SSC or California Fully Protected species, have the potential to occur in areas where development would be accommodated under the Housing Element Update (Table 4.3-1). Nearly all of the plant species with a potential to occur are found in chaparral, coastal scrub, valley and foothill grasslands and most of the wildlife would forage, roost, or nest through these habitats whereas other species would be limited to riparian woodland habitat.

Vegetation clearing and excavation could remove habitat or individuals. Excavation, ground clearing, equipment and materials storage, access routes, and other activities could result in impacts on runoff and/or water quality, potentially affecting habitat. Excavation, ground clearing, and access routes could result in air quality impacts (dust, exhaust) that could affect adjacent individuals. Equipment or construction-related traffic could introduce hazardous materials into habitats. Equipment and construction-related traffic could result in noise impacts affecting noise-sensitive species. Equipment and construction personnel could also introduce harmful, noxious, and/or invasive species that could damage habitats (such as by tracking in weed seeds). Any of these direct and indirect effects could result in significant impacts on special-status species. Even in fully developed areas, housing development activities have the potential to result in impacts on protected species.

The Housing Element Update would accommodate the development of 420,327 new housing units. The types of housing units anticipated under the Housing Element Update would generally fall into five categories of development projects - multi-family residential development; single-family residential development; accessory dwelling units (ADU); mixed use development; and conversion and/or rehabilitation of existing nonresidential, residential and mixed-use structures to be used for housing. Housing development accommodated under the Housing Element Update is expected to focus on encouraging development on infill sites in urbanized areas of the City, but it is reasonable to assume that some development would occur within or adjacent to natural areas that support special-status species. Potential impacts by housing category are described below.

- **Multi-family residential**: Multi-family residential projects may range in size from small apartment buildings with 2-10 units to larger apartment buildings and high-rise structures with hundreds of units. Multi-family developments of any size could potentially cause direct impacts, which may include the development within or abutting natural areas (i.e., wildland-urban interface). If sited adjacent to natural areas, multi-family development projects have the potential to directly and indirectly effect higher quality habitat. Higher quality habitats are areas that may support special-status species, such as contiguous areas of structurally diverse vegetation with food and water sources, or areas that support a disproportionately higher density of nesting birds (e.g., habitat selection or habitat occupancy).

  As listed in Table 4-2 in Section 4, *Environmental Analysis*, the 350 S Figueroa Sustainable Communities Environmental Assessment (SCEA) (570 MF DUs) and the Olympic and Hill SCEA (700 MF DUs) projects are recent examples of larger multi-family residential developments that resulted in significant impacts to protected trees and/or nesting birds due to demolition of the existing structures and grading of the sites. In addition, indirect impacts could include such as the introduction of light and noise

pollution into natural habitats. Compensation for loss of habitat, including trees, was added as a mitigation measure to reduce the impact of these projects to less than significant.

The 350 S Figueroa SCEA project site encompasses an area of approximately 160,140 sq. ft. (3.68 acres), located in Downtown area and is bound by Figueroa Street to the northwest, Third Street to the northeast, Fourth Street to the southwest, and Flower Street to the southeast. The site is currently developed with the World Trade Center. The Project includes the proposed demolition of an approximately 29,500-square-foot portion of an existing office and commercial structure and construction of a new, 41-story residential building integrated into the existing structure. The Project would add approximately 624,500 square feet of new residential floor area at the southwest corner of the Project site for a combined 925,000 square feet of floor area. The residential building would be a maximum of 480 feet in height and contain 570 residential units. The Floor Area Ratio (FAR) of the Project would be 5.8:1 and demonstrates the typical identified impact and mitigation that could occur related to this impact question for a project in the urban areas of the City without native habitat. The EIR found the following potential impacts related to this impact criteria:

> *A project-related, significant adverse effect could occur if a project were to cause an impact that is inconsistent with local regulations pertaining to biological resources, such as the City of Los Angeles Protected Tree Ordinance. As described in the Tree Report included as Appendix B to this document, there are nonnative ornamental trees on or adjacent to the Project site that would be removed during construction. These trees are not protected species under the City of Los Angeles Protected Tree Ordinance. However, they are off-site and within the public right of way and thus subject to the Board of Public Works, Urban Forestry Division.*

The following mitigation was imposed on the project:

> *MM-BIO-1 Tree Removal (Nonprotected Trees)*
>
> - *Prior to the issuance of any permit, a plot plan shall be prepared indicating the location, size, type, and general condition of all existing trees on the site and within the adjacent public right(s)-of-way.*
> - *Removal or planting of any tree in the public right(s)-of-way requires approval of the Board of Public Works. All trees in the public right(s)-of-way shall conform to the current standards of the Department of Public Works, Urban Forestry Division, Bureau of Street Services*

The Olympic and Hill Project includes the demolition of the existing surface parking lot on the Project Site and the construction of a 60-story mixed-use building (760 feet in height), which includes 700 residential dwelling units and 15,000 square feet of ground floor commercial/retail spaces. The Proposed Project would be 60 stories high consisting of seven levels of parking below grade, ground floor commercial/retail uses, a five-story podium with an amenity deck having glass railings, and a 55-

story residential tower above the amenity deck. The Proposed Project would provide a total of 1,075 vehicle parking spaces, which includes 840 spaces for the residential uses, 15 spaces for commercial/retail use in accordance with the Los Angeles Municipal Code ("LAMC") requirements, and 220 spaces for an adjacent office building by private contract agreement. Seven street trees (five Canary Island pine and two Southern Magnolia) would be removed from the public right-of-way; 184 new trees would be provided, including 42 street trees. Trees in the public right-of-way would be replaced at a minimum 2:1 ratio. The EIR found the following potential impacts related to this impact criteria:

The Project Site does not contain any critical habitat or support 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. Vegetation on the Project Site is limited to five street trees (Canary Island pine) in the public right-of-way along Hill Street and two street trees (Southern Magnolia) in the public right-of-way along Olympic Boulevard. It is anticipated that all of these trees would be removed. The removal and placement of street trees would be subject to the review and approval of the Board of Public Works, Urban Forestry Division. None of these trees in the public right-of-way are designated protected trees. Prior to the issuance of any permit, a plot plan shall be prepared indicating the location, size, type, and general condition of all existing trees on the site and within the adjacent public right(s)-of-way. Therefore, the Proposed Project would have a less than significant impact upon removal of non-protected trees.

With respect to the proposed removal of non-protected trees currently along the public right-of-way, the removal of trees has the potential to impact nesting bird species if they are present at the time of tree removal. Nesting birds are protected under the Federal Migratory Bird Treaty Act (MBTA) (Title 16, United States Code, Section 703 et seq., see also Title 50, Code of Federal Regulation, Part 20) and Section 3503 of the California Department of Fish and Game Code. To ensure compliance with the MBTA, the City of Los Angeles Department of City Planning advises applicants to avoid tree removal activities during the breeding season. If avoidance is not feasible, the Department recommends weekly bird surveys be conducted to ensure that the trees proposed for removal are not occupied by nesting birds. Thus, with implementation of Mitigation Measure BIO-1, listed above, the Proposed Project would have a less than significant impact on sensitive biological species or habitat.

The following mitigation was imposed on the project:

MM-BIO-1 Habitat Modification (Nesting Native Birds):

- *Proposed project activities (including disturbances to native and non-native vegetation, structures and substrates) should take place outside of the breeding bird season which generally runs from March 1- August*

31 (as early as February 1 for raptors) to avoid take (including disturbances which would cause abandonment of active nests containing eggs and/or young). Take means to hunt, pursue, catch, capture, or kill, or attempt to hunt, pursue, catch, capture of kill (Fish and Game Code Section 86).

- *If project activities cannot feasibly avoid the breeding bird season, beginning thirty days prior to the disturbance of suitable nesting habitat, the applicant shall:*
    - *Arrange for weekly bird surveys to detect any protected native birds in the habitat to be removed and any other such habitat within 300 feet of the construction work area (within 500 feet for raptors) as access to adjacent areas allows. The surveys shall be conducted by a Qualified Biologist with experience in conducting breeding bird surveys. The surveys shall continue on a weekly basis with the last survey being conducted no more than 3 days prior to the initiation of clearance/construction work.*
    - *If a protected native bird is found, the applicant shall delay all clearance/construction disturbance activities within 300 feet of suitable nesting habitat for the observed protected bird species (within 500 feet for suitable raptor nesting habitat) until August 31.*
    - *Alternatively, the Qualified Biologist could continue the surveys in order to locate any nests. If an active nest is located, clearing and construction within 300 feet of the nest (within 500 feet for raptor nests) or as determined by a qualified biological monitor, shall be postponed until the nest is vacated and juveniles have fledged and when there is no evidence of a second attempt at nesting. The buffer zone from the nest shall be established in the field with flagging and stakes. Construction personnel shall be instructed on the sensitivity of the area.*
- *The applicant shall record the results of the recommended protective measures described above to document compliance with applicable State and Federal laws pertaining to the protection of native birds. Such record shall be submitted and received into the case file for the associated discretionary action permitting the project.*

- **Single-family residential**: Single-family residential projects may range in size and scale from one-story single-family homes to multi-story single-family homes, and from small-lot subdivisions to multi-lot residential subdivisions. Direct impacts could result from development on a property containing suitable habitat for special-status species and/or nesting birds or adjacent to natural open space areas, while indirect impacts to special-status species and/or nesting birds could include light, noise, and air pollution. Residential subdivisions and other comparatively large-scale single-family development projects sited on sites that are undeveloped or that are adjacent to undeveloped areas may have greater potential to impact special-status resources because their footprints would potentially encompass a larger number of properties and their greater scale would create more substantial effects directly or indirectly. The Recirculated Draft EIR for the Hidden Creek Estates project is an example of the type of impacts that could result from a single-family home development in a previously undeveloped area. That project which is proposed in an unincorporated area adjacent to Porter Ranch on a 285-acre Project

site where 109 acres would be subdivided for 188 single family residential lots, including 25 equestrian residential lots. The RDEIR identified potential for 18 special-status wildlife species to exist on site and that several of those species could be impacted from ground clearance activities, construction activities, and future operations, including through increased human and domestic animal presence, increased population of nonnative plants, increased light and glare and stormwater runoff. The Draft EIR found all of the impacts could be reduced by mitigation measures including but not limited to requiring certified biologists to conduct onsite survey for special status species prior to and during construction activities and taking avoidance measures if species were identified, installation of fencing during construction to prevent animals entering construction area, public awareness campaign, CC&Rs to require dogs to be kept in fenced yards and on leashes, special lighting plan, removal of non-native plants, landscape plan, revegetation plan, and a native woodland mitigation plan. (RDEIR at IV.C-40 to 77.)

- **ADUs**: ADUs include attached ADUs created through a building addition or conversion of existing floor area and detached ADUs of various scales. The development of an ADU would be less likely than other development types to involve the ground-disturbing activities that would impact special-status species and nesting birds, because these developments are typically limited to areas currently developed or disturbed (i.e., urban). Nevertheless, ADUs sited in undeveloped, or less developed, portions of the City (e.g., hillside areas) would have the potential to affect biological resources, including impacts associated directly and indirectly with runoff and/or water quality and the introduction of light and noise pollution into natural habitats.
- **Mixed use development**: Mixed use development could range in size and scale from neighborhood commercial mixed use with smaller nonresidential uses, to high-rise mixed-use with larger nonresidential uses. Direct impacts could result from development on a property containing or abutting biological resources. Indirect impacts could include such as the introduction of light and noise pollution into natural habitats. Large-scale mixed use projects in urbanized areas would not be likely to have a direct impact, but such developments may have the potential to indirectly affect special-status species and nesting birds if sited in or adjacent to undeveloped areas.

  For example, as listed in Table 4-2, the 6901 Santa Monica Blvd Mixed-Use EIR Project, a mixed-use development with a 231 unit multi-family residential component, involved the demolition and removal of the existing office and automobile storage buildings and construction of a mixed use residential building with ground-floor neighborhood-serving commercial uses. Development of the project required removal of existing trees. Depending on the time of year that the project site is developed, nesting birds (which are protected by law) could inhabit the street trees surrounding the site. The EIR found the following potential impacts related to this impact criteria:

A significant impact would occur if a project would remove or modify habitat for any species identified or designated as a candidate, sensitive, or special status species in local or regional plans, policies, or regulation, or by the State or federal regulatory agencies cited above. The Project Site is located in a highly urbanized area of the City and is surrounded by existing residential development, and therefore it is not expected that the Project area contains habitat for any species identified or designated as a candidate, sensitive, or special status species. However, development of the Project would require removal of existing trees. Depending on the time of year that the Project Site is developed, nesting birds (which are protected by law) could inhabit the trees on the Project Site. As such, the Project Applicant would be required to implement the following standard City mitigation measure to ensure that no significant impacts related to nesting birds would occur. Therefore, impacts related to this issue would be less than significant, and no further analysis of this issue is required.

The following mitigation was imposed on the project:

4-1: Nesting Species. To avoid potential significant impacts to nesting birds, including migratory birds and raptors, one of the following shall be implemented by the Project Applicant:

Conduct vegetation removal associated with construction from September 1st through January 31st, when birds are not nesting. Initiate grading activities prior to the breeding season (which is generally February 1st through August 31st) and keep disturbance activities constant throughout the breeding season to prevent birds from establishing nests in surrounding habitat (in order to avoid possible nest abandonment); if there is a lapse in activities of more than five days, pre-construction surveys shall be necessary as described in the bullet below.

Or…

Conduct pre-construction surveys for nesting birds if vegetation removal or grading is initiated during the nesting season. A qualified wildlife biologist shall conduct weekly pre-construction bird surveys no more than 30 days prior to initiation of grading to provide confirmation on the presence or absence of active nests in the vicinity (at least 300 to 500 feet around the individual construction site, as access allows). The last survey should be conducted no more than three days prior to the initiation of clearance/construction work. If active nests are encountered, clearing and construction in the vicinity of the nests shall be deferred until the young birds have fledged and there is no evidence of a second attempt at nesting. A minimum buffer of 300 feet (500 feet for raptor nests) or as determined by a qualified biologist shall be maintained during construction depending on the species and location. The perimeter of the nest-setback zone shall be fenced or adequately demarcated with staked flagging at 20-foot intervals, and construction personnel and activities restricted from the area. Construction personnel should be instructed on the sensitivity of the area. A survey report by the qualified biologist documenting

and verifying compliance with the mitigation and with applicable state and federal regulations protecting birds shall be submitted to the City and County, depending on within which jurisdiction the construction activity is occurring. The qualified biologist shall serve as a construction monitor during those periods when construction activities would occur near active nest areas to ensure that no inadvertent impacts on these nests would occur.

- **Conversion and/or rehabilitation**: Existing nonresidential, residential and mixed-use structures could be converted or rehabilitated for new residential uses. Such projects are not expected to result in significant impacts to biological resources, including special-status species or their habitat because these types of development involve reuse of existing structures rather than demolition and new construction (or any significant new construction), and so would not be likely to incur the type of impacts described in the project types listed above. These housing development projects would be required to comply with the MBTA and CFGC; thus, impacts to nesting birds are also not anticipated.

If housing is sited within or adjacent to natural habitat, then it could affect special-status species or their habitats, which would be considered a significant impact. Vegetation clearing and excavation could remove habitat or individuals. Excavation, ground clearing, equipment and materials storage, access routes, and other activities could result in impacts on runoff and/or water quality, potentially affecting aquatic habitat. Excavation, ground clearing, and access routes could also result in air quality impacts (dust, exhaust) that could affect adjacent habitats. Equipment or construction-related traffic could introduce hazardous materials into habitats and generate noise that may impact special-status species and/or nesting birds.

Equipment and construction personnel could also introduce noxious and/or invasive species that could damage habitats, such as by disseminating seeds. Any of these effects could result in significant impacts on special-status species. In reviewing the projects listed in Table 4-2, none of the projects had significant unavoidable impacts to special status species. Nine had the potential for impacts and required mitigation. Of those projects requiring mitigation located in heavily urbanized areas of the City, all of the potential impacts related to undesignated trees and/or migratory birds. Those projects requiring mitigation for listed species other than the City's protected tree ordinance or migratory birds were located in hillsides or otherwise involved previously undisturbed land. As such, impacts from build out of the RHNA would depend most on the location of the housing development project and whether it is occurring near habitat that could support or is used by special status species. Size and scope of the project can also affect the level of impact, but even the construction of a single-family home or ADU can have the potential to impact sensitive species depending on the location.

Therefore, impacts to special-status species from build out of the RHNA under the Housing Element Update are ***potentially significant.***

Nesting Birds

The City of Los Angeles is primarily urbanized, and the Housing Element Update would prioritize development on infill sites that have been previously developed and/or disturbed. However, housing development accommodated by the Housing Element Update could potentially disturb active bird nests. Such impacts would be reduced to less than significant after implementation of mitigation.

Migratory birds, including most birds that nest in the areas subject to housing development under the Proposed Project, are protected by the federal MBTA, which forbids most forms of harm to birds, including to their active nests. In addition, California Fish and Game Code Section 3503 makes it unlawful to destroy nests or eggs of any bird, except as otherwise provided by code or regulation. Where vegetation, and especially trees, are removed as part of housing development under any of the various housing types, there is the potential for violations under the MBTA and Section 3503 of the California Fish and Game Code, which are considered significant. Compliance with existing laws and regulations (e.g., MBTA and CFGC), would reduce potential impacts to nesting birds to a ***less than significant level.***

Safety Element

The Proposed Project includes targeted updates to the Safety Element that would integrate goals, policies, and objectives from other citywide long-range planning documents into the General Plan. The policies associated with biological resources would aim to comply with existing policies under the Conversation and Open Space Elements to maintain green space, and develop and implement procedures to protect sensitive species from potential hazards associated with hazard mitigation and disaster recovery efforts. Therefore, these updates would not adversely impact special-status species, and potential impacts to biological resources under the Safety Element Update would be ***less than significant***.

Mitigation Measures

4.3-1(a) Biological Resources Reconnaissance Survey and Reporting

For all discretionary projects that require vegetation removal, ground disturbance, staging of vehicles, equipment, or materials, and access routes of on natural (e.g., native, virgin) or disturbed (e.g., unpaved, areas barren, or ruderal), areas that contain or have the potential to support special-status species, sensitive habitat, or within 300 feet of suitable habitat to support special-status species (e.g., nesting passerines) as determined by the Department of City Planning and/or CDFW, the project applicant shall be required to conduct a biological resources assessment report to characterize the biological resources on-site and to determine the presence or absence of sensitive species. The report shall identify 1) approximate population size and distribution of any sensitive plant or animal species, 2) any sensitive habitats (such as wetlands or riparian areas), and 3) any potential impacts of Proposed

Project on wildlife corridors. Off-site areas that may be directly or indirectly affected by the individual project shall also be surveyed. The report shall include site location, literature sources, methodology, timing of surveys, vegetation map, site photographs, and descriptions of on-site biological resources (e.g., observed and detected species, as well as an analysis of those species with the potential to occur on-site). The biological resources assessment report and surveys shall be conducted by a qualified biologist, and any special status species surveys shall be conducted according to standard methods of surveying for the species as appropriate.

If sensitive species and/or habitat are absent from the individual project site and adjacent lands potentially affected by the individual project, a written report substantiating such shall be submitted to Department of City Planning (DCP) prior to issuance of a grading permit, and the project may proceed without any further biological investigation. If wildlife corridors are present, the report shall identify measures (such as providing native landscaping to provide cover on the wildlife corridor) that the individual project would be required to implement such that the existing wildlife corridor would remain. Wildlife corridors identified in the biological resources assessment report shall not be entirely closed by any development or improvements occurring within the Project Area.

4.3-1(b) Pre-Construction Bird Nest Surveys, Avoidance, and Notification

For all discretionary projects where sensitive species and/or habitat are identified, the biological resources assessment report shall require pre-construction surveys for sensitive species and/or construction monitoring to ensure avoidance, relocation, or safe escape of the sensitive species from the construction activities, as appropriate. If sensitive species are found to be nesting, brooding, denning, etc. on-site during the pre-construction survey or during construction monitoring, construction activities shall be halted until offspring are weaned, fledged, etc. and are able to escape the site or be safely relocated to appropriate off-site habitat areas. A qualified biologist shall be on-site to conduct surveys, for construction monitoring, to perform or oversee implementation of protective measures, and to determine when construction activity may resume. Additionally, the biological resources assessment report shall be submitted to DCP and California Department of Fish and Wildlife (CDFW) prior to ground-disturbing activities. A follow-up report documenting construction monitoring, relocation methods, and the results of the monitoring and species relocation shall also be submitted to DCP and CDFW following construction.

Construction activities initiated during the bird nesting season (February 1 – August 31) involving removal of vegetation or other nesting bird habitat, including abandoned structures and other man-made features, a pre-construction nesting bird survey shall be conducted no more than three days prior to initiation of ground disturbance and vegetation removal activities. The nesting bird pre-construction

survey shall be conducted on foot and shall include a 100-foot buffer around the construction site. The survey shall be conducted by a biologist familiar with the identification of avian species known to occur in southern California. If nests are found, an avoidance buffer shall be determined dependent upon the species, the proposed work activity, and existing disturbances associated with land uses outside of the site, which shall be demarcated by the biologist with bright orange construction fencing, flagging, construction lathe, or other means to demarcate the boundary. All construction personnel shall be notified as to the existence of the buffer zone and to avoid entering the buffer zone during the nesting season. No ground disturbing activities shall occur within the buffer until the avian biologist has confirmed that breeding/ nesting is completed, and the young have fledged the nest. Encroachment into the buffer shall occur only at the discretion of the qualified biologist on the basis that the encroachment will not be detrimental to an active nest. A Statement of Compliance signed by the Applicant and Owner is required to be submitted to Los Angeles Department of Building and Safety at plan check and prior to the issuance of any permit. A report summarizing the pre-construction survey(s), construction monitoring, and implementation of protective measures conducted shall be prepared by a qualified biologist and shall be submitted to the City within two weeks of project completion.

Proposed Project site plans shall include a statement acknowledging compliance with the federal MBTA and CFGC that includes avoidance of active bird nests and identification of Best Management Practices to avoid impacts to active nests, including checking for nests prior to construction activities during February 1 to August 31 and what to do if an active nest is found so that the nest is not inadvertently impacted during grading or construction activities.

4.3-1(c) Focused Surveys for Rare Plants

If indicated as appropriate by the biological resources assessment report required in Mitigation Measure 4.3-1(a), focused surveys for special status plants shall be conducted. Prior to vegetation clearing for construction in open space areas, special status plants identified in the focused surveys shall be counted and mapped and a special-status plant relocation plan shall be developed and implemented to provide for translocation of the plants. The plan shall be prepared by a qualified biologist and shall include the following components: (1) identify an area of appropriate habitat, on-site preferred; (2) depending on the species detected, determine if translocation will take the form of seed collection and deposition, or transplanting the plants and surrounding soil as appropriate; (3) develop protocols for irrigation and maintenance of the translocated plants where appropriate; (4) set forth performance criteria (e.g., establishment of quantitative goals, expressed in percent cover or number of individuals, comparing the restored and impacted population) and remedial measures for the translocation effort; and (5) establish a five-year monitoring procedures/protocols for the

translocated plants. Five years after initiation of the restoration activities, a report shall be submitted to DCP and CDFW, which shall at a minimum discuss the implementation, monitoring, and management of the restoration activities over the five-year period and indicate whether the restoration activities have, in part or in whole, been successful based on the established performance criteria. The restoration activities shall be extended if the performance criteria have not been met at the end of the five-year period to the satisfaction of DCP, CDFW, and U.S. Fish and Wildlife Service (USFWS), when applicable.

4.3-1(d) Adaptive Management Plan

If indicated as appropriate in a reconnaissance, pre-construction or focused survey required in Mitigation Measure 4.3-1(a), (b), or (c) the biologist shall prepare an Adaptive Management Plan for future operations to ensure that operations will not result in impacts to special status species, such as lighting plans, fencing plans, revegetation plans, and/or necessary covenants to ensure property owners maintain their properties in a way to reduce impacts to native species, such as requirements for keeping domestic animals or use of non-native vegetation, and/or education campaigns. Applicants shall prepare necessary documentation and provide adequate assurances to ensure compliance with ongoing operational requirements, including such measures as, but not limited to, filing of covenants, creation of funding mechanism, or provision of bonds.

Significance After Mitigation

Mitigation Measure 4.3-1(a) through (d) requires the completion of a biological resources assessment reports for any projects that require vegetation removal, ground disturbance, staging of vehicles, equipment, or materials, and access routes on natural (e.g., native, virgin) or disturbed (e.g., unpaved, barren, or ruderal), areas that contain or have the potential to support special-status species, sensitive habitat, or within 300 feet of suitable habitat to support special-status species. If sensitive species and/or habitat are identified, pre-construction surveys will be conducted, and other protective measures will be implemented as needed during the pre-construction and construction monitoring phases. In addition, the measure requires focused surveys for special-status plants if the biological resources assessment report deems it appropriate to conduct such a survey. Additionally, mitigation plans to address operational impacts may also be required.

Implementing these conditions for projects would reduce the potential for substantial adverse effect on species identified as a candidate, sensitive, or special species in local or regional plans, policies, or regulations, or by the CDFW or USFWS, on most development sites. However, as Mitigation Measure 4.3-1(a)-(d) would not apply to ministerial projects, the mitigation measures would not eliminate all potential

impacts to special-status species from implementation of the Project. Applying the measure to ministerial projects is infeasible based on the necessary resources to implement and administer the measure and the burden to needed housing. Additionally, without knowing all site-specific conditions and depending on circumstances, even applying mitigation measures, impacts may still occur. Therefore, impacts related to the Housing Element Update are ***significant and unavoidable.***

Threshold 4.3-2	Would the Proposed 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 Wildlife or US Fish and Wildlife Service?

Impact 4.3-2 Policies and programs of the Safety Element Update would not adversely impact riparian habitat or other sensitive natural community, including protected trees or tree canopies; therefore, impacts related to the Safety Element Update would be ***less than significant***. Housing development accommodated under the Housing Element Update could potentially adversely impact areas that support sensitive natural communities, riparian habitats, protected trees or tree canopies. Mitigation Measures 4.3-2(a) and 4.3-2(b) may not be applicable to all development; therefore, such impacts would be ***significant and unavoidable***.

Riparian Habitats

As described under Environmental Setting, drainages and naturalized portions of local waterways within the City and surrounding foothills and mountains support riparian habitat. Some of the more pronounced examples of riparian habitats in the City include the Los Angeles River and its tributaries, including the Pacoima Wash, Tujunga Wash, and Verdugo Wash.

Housing development accommodated under the Housing Element Update that is sited adjacent to or abutting these resources could result in direct and indirect impacts to riparian habitat. Vegetation clearing and excavation could remove habitat. Excavation, ground clearing, equipment and materials storage, access routes, and other activities could result in impacts on runoff and/or water quality, potentially affecting habitat. Excavation, ground clearing, and access routes could result in air quality impacts (dust, exhaust) that could affect adjacent habitat. Equipment or construction-related traffic could introduce hazardous materials into habitats. Equipment and construction personnel could also introduce harmful, noxious, and/or invasive species that could damage habitats (such as by tracking in weed seeds). Any of these effects could result in significant impacts on riparian habitats.

Sensitive Natural Communities

Sensitive natural communities listed by the CNDDB as having occurred in the City include: California walnut woodland, riversidian alluvial fan sage scrub, southern California arroyo chub/Santa Ana sucker stream, southern coast live oak riparian forest, southern coastal bluff scrub, southern coastal salt marsh, southern cottonwood willow riparian forest, southern dune scrub, southern mixed riparian forest, southern sycamore alder riparian woodland, valley oak woodland, and walnut forest (CDFW 2019). These communities have limited distributions, have high wildlife value, include sensitive species, or are particularly susceptible to disturbance. Housing development accommodated under the Housing Element Update that is sited adjacent to or abutting these sensitive communities could result in direct and indirect impacts to those resources. Vegetation clearing and excavation could remove habitat or result in impacts on runoff and/or water quality, potentially affecting habitat. In addition to direct construction-related impacts, impacts could also occur from fuel management and maintenance of defensible space, particularly in Very High Fire Hazard Severity Zones (VHFHSZ) is required under City Ordinance No. 185,789 and Chapter 49 of the California Fire Code.

Housing development accommodated under the Housing Element Update may also be located adjacent to County designated SEAs. SEAs located within the City boundaries include: Ballona Creek, Tujunga Valley-Hansen Dam, and Chatsworth Reservoir Simi Hills, Encino Reservoir, Temescal-Rustic-Sullivan Canyons, Griffith Park, Terminal Island, and Verdugo Mountains (City of Los Angeles 2015). These areas are key to conserving fragile resources such as streams, oak woodlands and threatened or endangered species and their habitat. Griffith Park, for example, is an important natural area for animals and plants species that go between the Santa Monica and San Gabriel mountains. The SEA provides habitat that at some point in the life cycle of a species or group of species, serves as concentrated breeding, feeding, resting, or migrating grounds and is limited in availability either regionally or in the County. Like impacts to riparian habitat, any number of development-related effects could result in significant impacts on sensitive natural communities.

Urban Tree Canopy

Based on comments received during the scoping period, there is concern regarding the loss of the urban tree canopy (UTC), i.e., non-protected trees and non-riparian trees, due to the housing development accommodated under the Housing Element Update. According to the United States Department of Agriculture, "improving a city's urban tree canopy can have numerous benefits, including reducing summer peak temperatures and air pollution, enhancing property values, providing wildlife habitat, providing aesthetic benefits, and improving social ties among neighbors. A robust tree canopy can also attract businesses and residents (USDA 2019)." The City has also stated that, increased conversion of landscapes, or loss of tree canopy could result in a reduction of habitat quality with implications for future

presence of fauna (City of Los Angeles 2020). While not designated as a sensitive habitat, continued loss of the UTC has the potential to adversely affect habitat supporting special-status species (e.g., tree roosting bats, nesting birds), the loss of which is considered a potentially significant impact.

Potential impacts by housing category is described below.

- **Multi-family residential**: Multi-family residential projects may range in size from small apartment buildings with 2-10 units to larger apartment buildings and high-rise structures with hundreds of units. Multi-family developments of any size could potentially cause direct impacts, which may include the development within or abutting natural areas (i.e., wildland-urban interface). If sited within or adjacent to natural areas, multi-family development projects may have the potential to result in substantial impacts to riparian habitat or other sensitive natural community. As listed in Table 4-2, the 350 S Figueroa SCEA (570 MF DUs) and the Olympic and Hill SCEA (700 MF DUs) projects are recent examples of larger multi-family residential developments that involved the demolition of existing structures and grading of the sites. Both projects resulted in potential significant impacts to trees. Compensation for loss of habitat, including trees, were added as a mitigation measure to reduce the impacts of the projects to less than significant.
- **Single-family residential**: Single-family residential projects may range in size and scale from one-story single-family homes to multi-story single-family homes, and from small-lot subdivisions to multi-lot residential subdivisions. Direct impacts could result from development on a property containing or adjacent to sensitive habitat.

  As listed in Table 4-2, the Hidden Creek Estates EIR (188 SF DUs) project consists of a proposal to annex the project site into the City of LA and subdivide the site to create 188 single-family residential lots (25 of which would be Equine keeping Residential lots), a public park, and an equestrian center. The DEIR found the following potential impacts related to this impact criteria:

  > *Construction of the project would result in removal of approximately 190 acres of grassland and open space in which golden eagle might forage and winter. However, the availability of similar habitat in other locations within the vicinity of the project site would provide foraging and wintering habitat for this species. Due the high mobility of this species, project activities would be unlikely to directly impact wintering individuals of this species. Therefore, impacts to this species from construction activities would be less than significant.*
  >
  > *Construction of the project would result in the conversion of the pool in which the two-striped garter snake has been observed. The species has disappeared from approximately 40 percent of its historic range on the California mainland, and can now be considered common only in eastern San Diego County. Much of the decline is attributed to habitat destruction from urbanization and alteration of hydrological features. During the past decade, this species has disappeared from numerous locations in Ventura, Santa Barbara, and San*

Luis Obispo Counties, where habitat was once considered to be relatively secure from development. Because this species has been disappearing rapidly from throughout its range, and because the aquatic habitats on which they depend are subject to intense hydro-modification, impacts to this species associated with removal of on-site aquatic habitat would be considered a potentially significant impact. However, impacts will be reduced to less than significant with the implementation of MM-BIO-4.

Construction of the project would result in the conversion of 10.6 acres of Coast Live Oak Woodland and 4.4 acres of Mixed California Walnut–Coast Live Oak Woodland. Where large trees occur within these habitat types, suitable nesting habitat may occur for Cooper's hawk or white-tailed kite. If these bird species were to nest on the project site, construction-related activities could result in the direct loss of an active nest or the abandonment of an active nest by adult birds during that year's nesting season. Bird nests with eggs or young are protected under the Migratory Bird Treaty Act and the California Fish and Game Code. Therefore, any loss or abandonment of an active Cooper's hawk nest or white-tailed kite nest would be a significant impact. However, impacts will be reduced to less than significant with the implementation of MM-BIO-2. Construction of the project would result in conversion of 109.2 acres of Non-Native Grassland and 31.1 acres of Mixed Sage Scrub, each of which provides suitable habitat for southern California rufous-crowned sparrow. Implementation of the project would result in the removal of 14.4 acres of Coastal Sage Chaparral Scrub, which provides suitable habitat for Bell's sage sparrow. These scrub habitats also provide habitat for Bell's sage sparrow. If these bird species were to nest on the project site, construction-related activities could result in the direct loss or abandonment of a nest. Bird nests with eggs or young are protected under the Migratory Bird Treaty Act and the California Fish and Game Code. Consequently, impacts due to the loss or abandonment of an active southern California rufous-crowned sparrow or Bell's sage sparrow nest would be a potentially significant impact. However, impacts will be reduced to a less than significant level with the implementation of MM-BIO-1 and MM-BIO-2.

Implementation of the project would involve activities resulting in direct and indirect impacts to riparian habitat on the project site and the Mason Avenue extension road easement. Off-site remedial grading and grading associated with the extension of Mason Avenue for access to the eastern portion of the project site would involve removal of 0.3 acres of Mixed Willow Riparian Woodland. In addition, indirect impacts to wildlife use of Mormon Canyon drainage are expected to occur from vehicle use of the proposed bridge spanning the canyon. Riparian habitat in Mormon Canyon drainage provides suitable nesting habitat for southwestern willow flycatcher, least Bell's vireo, yellow warbler, and yellow-breasted chat. Direct removal of suitable riparian habitat, as well as short-term indirect impacts associated with construction of the span bridge and long-term indirect impacts resulting from on-going usage of the bridge by vehicles entering and exiting the project site would disturb sensitive riparian species in this area, potentially including southwestern willow flycatcher and/or least Bell's vireo individuals, if they were to nest within habitat in the drainage. Therefore, if nests for any sensitive bird are located within riparian habitat located on the project

site or within off-site impact areas, this impact would be significant. However, this impact will be reduced to less than significant with the implementation of MM-BIO-1.

On-site scrub, woodland, and grassland vegetation types provide suitable habitat for silvery legless lizard, coast horned lizard, coastal whiptail, San Bernardino ring-neck snake, San Diego black-tailed jackrabbit, and San Diego desert woodrat. If these species occur on the project site, construction-related activities could result in the direct loss of individuals of the species. In addition, trees in Coast Live Oak Woodland, Mixed California Black Walnut–Coast Live Oak Woodland, California walnut woodland, and Mixed Coast Live Oak–Willow Riparian Woodland vegetation types provide suitable roosting habitat for two bat species, western yellow bat and Yuma myotis. If these species roost on the project site, construction-related activities could result in the direct loss of individuals of the species. The loss of individuals of the species would be a significant impact. However, this impact will be reduced to less than significant with the implementation of MM-BIO-3 and MM-BIO-4.

Trees, shrubs, and grasslands within the project site provide suitable nesting habitat for a variety of bird species. Therefore, in addition to the above special-status wildlife species, project implementation could result in impacts to common nesting bird species, which are regulated under the Fish and Game Code of California and the Migratory Bird Treaty Act. Disturbance associated with construction of the project could result in nest abandonment for bird species, which would be a significant impact. However, this impact will be reduced to less than significant with the implementation of MM-BIO-4.

The following mitigation was imposed on the project:

MM-BIO-1 The project applicant shall retain a certified biologist(s) to conduct southwestern willow flycatcher surveys, in accordance with US Fish and Wildlife Service (USFWS) protocols, and least Bell's vireo surveys, in accordance with USFWS protocols. If southwestern willow flycatcher and/or least Bell's vireo individuals or active nests of are observed or detected during protocol surveys, construction activities in the area shall be halted/postponed, and the CDFW and USFWS shall be contacted and informed of the finding immediately. If surveys result in observation of nesting individuals, construction activities within 500 feet of the nest shall not commence until the nest is vacated and juveniles have fledged and there is no evidence of a second attempt at nesting, as determined by a certified biologist and confirmed by the CDFW and USFWS. In addition, if an active willow flycatcher and/or least Bell's vireo nest is observed, the applicant shall either re-create the impacted riparian habitat on the project site or shall secure purchase and conservation (through direct placement of a conservation easement over lands, or purchase of lands in a program that has already entered a conservation easement) of suitable riparian habitat for the nesting species. Such habitat shall contain Mixed Willow Riparian Woodland of a similar or better quality as that within which the active nest was found. The creation/purchase of such lands shall be carried out in coordination with the CDFW and USFWS, and on the basis of a minimum 3:1 ratio, or at a ratio determined to be

appropriate by the wildlife agencies, for the acreage of nesting habitat determined to be impacted by the project.

MM-BIO-2 The project applicant shall retain a certified biologist to conduct nest surveys within suitable nesting habitat within the project site prior to grading, construction, or project site preparation activities. Surveys shall include examination of trees, shrubs, and the ground within grassland for nesting birds, as several bird species known to the area are shrub or ground nesters, including mourning dove. Specifically, within 30 days of initiation of ground-disturbance activities associated with construction or grading, the biologist shall conduct weekly surveys to determine if active nests of bird species protected by the Migratory Bird Treaty Act and/or the California Fish and Game Code are present in the construction zone or within 300 feet (500 feet for raptors) of the construction zone. Because many birds known to occur in the project area (including Cooper's hawk and several species of hummingbirds) may nest during the late winter, breeding bird surveys shall be carried out both during the typical nesting/breeding bird season of mid-March through September and in January through early March. The surveys shall continue on a weekly basis, with the last survey being conducted no more than 3 days prior to initiation of clearance/construction work. If ground-disturbance activities are delayed, then additional preconstruction surveys will be conducted such that no more than 3 days will have elapsed between the last survey and the commencement of ground-disturbance activities. If active nests are found, clearing and construction activities within 300 feet of the nest (500 feet for raptors) shall be postponed or halted until the nest is vacated and juveniles have fledged and there is no evidence of a second attempt at nesting, as determined by the biologist. Limits of construction to avoid an active nest shall be established in the field with flagging, fencing, or other appropriate barriers and construction personnel shall be instructed on the sensitivity of nest areas. The biologist shall serve as a construction monitor during those periods when construction activities will occur near active nest areas to ensure that no inadvertent impacts on these nests will occur. The results of the survey, and any avoidance measures taken, shall be submitted to the Los Angeles Department of City Planning within 30 days of completion of the preconstruction surveys and/or construction monitoring to document compliance with applicable state and federal laws pertaining to the protection of native birds.

MM-BIO-3 Prior to conducting preconstruction nesting bird surveys, a certified biologist shall consult with the California Department of Fish and Wildlife (CDFW) to identify possible relocation sites for captured individuals, and be in possession of a CDFW Scientific Collection Permit and CDFW Memorandum of Understanding prior to survey initiation. The biologist conducting the surveys shall examine on-site trees and other potential roosting habitat for evidence of roosting bats (western yellow bat and Yuma myotis), particularly during the breeding season of native bats (generally April 1 through August 31). Surveys shall include examination of trees for roosting bats under bark, in trunks, and behind leaves. Surveys shall also include review of woodland areas at dusk. If active roosts are found, construction shall be postponed within 300 feet of the location until the roost is vacated and juveniles have fledged, as determined by the biologist.

MM-BIO-4 The applicant shall retain a certified biologist to conduct preconstruction surveys on the project site in the proposed development areas and 500 feet beyond the grading limits for the presence of special-status wildlife species with the potential to occur in on-site habitats that will be directly impacted by project activities. The biologist shall possess a CDFW Scientific Collecting Permit and obtain a CDFW Memorandum of Understanding prior to the implementation of preconstruction surveys. Surveys shall include an examination of the on-site pool and the perennial areas of Mormon and Browns Canyon streams for two-striped garter snake and southwestern pond turtle, and on-site scrub, woodland, and grassland plant communities for silvery legless lizard, coast (San Diego) horned lizard, coastal western whiptail, San Bernardino ring-neck snake, San Diego blacktailed jackrabbit, and San Diego desert woodrat. If one of the above special-status species is observed on the project site during clearance surveys, potential loss of individual animals shall be mitigated by (1) ensuring that construction activities do not enter the specific area in which the individual was observed until the individual has been observed vacating the area and moving into habitat that will not be directly impacted by project activities (appropriate for highly mobile species, such as San Diego black-tailed jackrabbit); or (2) through active trapping and relocation program, conducted by the biologist and in coordination with the CDFW, that will move individuals to suitable on-site habitat that will not be directly impacted by project implementation (appropriate for less mobile species, such as two-striped garter snake, coast (San Diego) horned lizard, or San Diego desert woodrat).

- **ADUs**: ADUs include attached ADUs created through a building addition or conversion of existing floor area and detached ADUs of various scales. The development of an ADU would be less likely than other development types to involve direct or indirect impacts to sensitive habitat because these developments would be limited to areas currently developed or disturbed (i.e., urban). ADUs sited in undeveloped, or less developed, portions of the City (e.g., hillside areas), however, would have the potential to affect biological resources, including impacts associated directly and indirectly with runoff and/or water quality and the introduction of light and noise pollution into natural habitats.
- **Mixed use development**: Mixed use development could range in size and scale from neighborhood commercial mixed use with smaller nonresidential uses, to high-rise mixed-use with larger nonresidential uses. Direct impacts could result from development on a property containing or abutting sensitive habitat. Similar to multi-family residential development, large-scale mixed use projects in urbanized areas are not anticipated to result in significant direct impacts to biological resources; however, such developments may have the potential to indirectly affect sensitive habitat if sited in or adjacent to undeveloped areas (e.g., light, noise, and run-off). Impacts could be similar to those described under the Hidden Creek Estates Project if constructed in an area that a was not previously developed or near a riparian habitat. Otherwise, the 350 S Figueroa SCEA Project, and the Olympic and Hill SCEA Project, are good examples of the typical mixed use development that would occur which did not affect sensitive natural community or riparian habitat. They did involve the

removal of trees, including street trees or trees that add to the urban canopy, which required replacement plans under the City's tree program and/or required mitigation to protect potential impacts to migratory birds. For example, the Olympic and Hill SCEA found the following:

> *The Project Site is located in a highly urbanized area in the City of Los Angeles and is improved a paved surface parking lot. The Project Site does not contain any critical habitat or support 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. Vegetation on the Project Site is limited to five street trees (Canary Island pine) in the public right-of-way along Hill Street and two street trees (Southern Magnolia) in the public right-of-way along Olympic Boulevard. It is anticipated that all of these trees would be removed. The removal and placement of street trees would be subject to the review and approval of the Board of Public Works, Urban Forestry Division. None of these trees in the public right-of-way are designated protected trees. Prior to the issuance of any permit, a plot plan shall be prepared indicating the location, size, type, and general condition of all existing trees on the site and within the adjacent public right(s)-of-way. Therefore, the Proposed Project would have a less than significant impact upon removal of non-protected trees.*
>
> *With respect to the proposed removal of non-protected trees currently along the public right-of-way, the removal of trees has the potential to impact nesting bird species if they are present at the time of tree removal. Nesting birds are protected under the Federal Migratory Bird Treaty Act (MBTA) (Title 16, United States Code, Section 703 et seq., see also Title 50, Code of Federal Regulation, Part 20) and Section 3503 of the California Department of Fish and Game Code. To ensure compliance with the MBTA, the City of Los Angeles Department of City Planning advises applicants to avoid tree removal activities during the breeding season. If avoidance is not feasible, the Department recommends weekly bird surveys be conducted to ensure that the trees proposed for removal are not occupied by nesting birds. Thus, with implementation of Mitigation Measure BIO-1, listed above, the Proposed Project would have a less than significant impact on sensitive biological species or habitat.*

- **Conversion and/or rehabilitation**: Existing nonresidential, residential and mixed use structures could be converted or rehabilitated for new residential uses. Such projects are not expected to result in significant impacts to sensitive habitat because these types of development involve reuse of existing structures rather than demolition and new construction (or any significant new construction), and so would not be likely to incur the type of impacts described in the project types listed above.

Housing development accommodated under the Housing Element Update that is within or adjacent to sensitive habitats, such as riparian, oak woodlands, or stands of protected trees (e.g., walnuts, oaks, sycamore), could result in potential direct and impacts through removal of vegetation, compaction of soils, and/or indirectly through dust and vegetation thinning. Through zoning restrictions, housing development

would be consistent with the objectives, policies, and programs contained within the City's General Plan Conservation Element to protect sensitive species, which would have direct and indirect beneficial effects for special status species, such as through preserving, protecting, restoring, and enhancing natural plant and wildlife diversity, habitats, corridors, and linkages to enable the healthy propagation and survival of native species. The Housing Element Update and the Safety Element Update would not change the objectives, policies, and programs contained within the City's Conservation Element. However, it is reasonably foreseeable that implementation of the Project could impact various habitat types, including riparian habitat and other sensitive plant communities. Therefore, impacts related to riparian habitat or other sensitive natural community identified in local or regional plans, policies or regulations, or by the CDFW or USFWS are ***potentially significant***.

Safety Element

The Proposed Project includes targeted updates to the Safety Element that would integrate goals, policies, and objectives from other citywide long-range planning documents into the General Plan. The policies associated with biological resources would aim to comply with existing policies under the Conversation and Open Space Elements to maintain green space, and develop and implement procedures to protect sensitive species from potential hazards associated with hazard mitigation and disaster recovery efforts. Therefore, these updates would not result in any adverse impacts riparian habitat or other sensitive natural community, and potential impacts to biological resources under the Safety Element Update would be ***less than significant.***

Mitigation Measures

4.3-2(a) Habitat Mitigation and Monitoring Plan

For discretionary projects that are in areas potentially containing sensitive natural communities or jurisdictional waters and riparian habitat, including streams, wetlands, riparian habitat, and other water bodies, affected sites as well as off-site areas that may be directly or indirectly affected by the individual development project, prior to the issuance of grading permits, the applicant shall prepare and submit a Habitat Mitigation and Monitoring Program (HMMP), which shall mitigate for impacts to CDFW jurisdictional habitat at a 2:1 ratio for permanent impacts and a 1:1 ratio for temporary impacts, or as otherwise approved by CDFW and the City.

The HMMP shall mitigate for impacts to jurisdictional areas via an acceptable mitigation approach that involves one or a combination of the on-site or off-site restoration or enhancement of degraded in-kind habitats, preservation of in-kind habitats, or by a contribution to an in-lieu fee program approved by the City, CDFW (and USACE, RWQCB, if applicable).

The final HMMP shall be developed by a qualified biologist, restoration ecologist or resource specialist and submitted to and approved by the City and CDFW (USACE, RWQCB, if applicable), in compliance with Clean Water Act Sections 401 and 404 and California Fish and Game Code 1602 and supporting regulations, prior to issuance of a grading permit for the project. In broad terms, this Program shall at a minimum include:

- Description of the project/impact and mitigation sites;
- Specific objectives;
- Success criteria;
- Plant palette;
- Implementation plan;
- Maintenance activities;
- Monitoring plan; and
- Contingency measures.

Success criteria shall at a minimum be evaluated based on appropriate survival rates and percent cover of planted native species, as well as eradication and control of invasive species within the restoration area.

The target species and native plant palette, as well as the specific methods for evaluating whether the project has been successful at meeting the above-mentioned success criteria shall be determined by the qualified biologist, restoration ecologist, or resource specialist and included in the HMMP.

The HMMP shall be implemented over a five-year period and shall incorporate an iterative process of annual monitoring and evaluation of progress and allow for adjustments to the program, as necessary, to achieve desired outcomes and meet success criteria. Annual reports discussing the implementation, monitoring, and management of the HMMP shall be submitted to City and the CDFW (USACE, RWQCB, if applicable). Five years after project start, a final report shall be submitted to the City and the CDFW (USACE, RWQCB, if applicable), which shall at a minimum discuss the implementation, monitoring and management of the mitigation project over the five-year period, and indicate whether the HMMP has met the established success criteria. The annual reports and the final report shall include as-built plans submitted as an appendix to the report. Restoration will be considered successful after the success criteria have been met for a period of at least two years without any maintenance or remediation activities other than invasive species control. The project shall be extended if the success

criteria have not been met at the end of the five-year period to the satisfaction of the City and the CDFW (USACE, RWQCB, if applicable).

4.3-2(b) Protected Tree and Tree Canopy Survey

For discretionary projects that include the removal of trees, prior to the issuance of a grading permit, a tree report and tree replanting plan shall be conducted by a certified arborist prior to project construction to tag and assess all trees (defined as woody plant material that is five inches or greater in diameter at breast height [DBH – four and a half feet off grade]) subject to the City's Protected Tree Ordinance on the project site. Trees shall be tagged to correspond with a tree exhibit map. Also, the genus and species of the trees, size of the trees at DBH, and structure and vigor of the trees shall be determined, and an evaluation of the trees' resource value (i.e., the biological impacts of the tree removals, potential to be considered wildlife habitat, and locating trees deserving protection) shall be completed. All protected trees shall receive a visual tree assessment (VTA – meaning tree observations shall be from the ground and that no special devises [e.g., increment borers, drills] shall be used). Following the completion of the tree survey, the arborist shall prepare a report that shall at a minimum provide a description of the general character of the trees on the site and identify opportunities and constraints for preservation. The report and tree replanting plan shall be provided to the City for review. As part of the assessment, a plot plan shall also be prepared indicating the location, type, and canopy coverage of all existing trees on the site and within the adjacent public right(s)-of-way.

Based on the results of the tree survey, development plans shall be clustered to maximum extent feasible in order to avoid impacts to sensitive natural communities (e.g., oak woodlands, riparian habitats, extensive tree canopy) and to maintain the largest and most contiguous area of sensitive communities on the site. Additionally, the development plans shall include a proposed minimum buffer to protect adjacent sensitive communities. Development plans that impact sensitive natural communities shall include a detailed feasibility analysis showing how the design has accomplished these avoidance strategies; the City shall not approve development plans until the site design has adequately demonstrated maximum avoidance of sensitive natural communities to the satisfaction of the City Planning .

Further, removal or planting of any tree in the public right(s)-of-way requires approval of the Board of Public Works. All trees in the public right(s)-of-way shall conform to the current standards of the Department of Public Works, Urban Forestry Division, Bureau of Street Services.

The following measures shall be implemented in addition to those required under the City's Protected Tree Ordinance (Ordinance No. 177,404) to avoid and/or compensate for potential indirect impacts to preserved sensitive natural communities before, during, and following construction activities.

Pre-Construction

- Fencing: Protective fencing at least three feet high with signs and flagging shall be erected around all preserved sensitive natural communities where adjacent to proposed vegetation clearing and grubbing, grading, or other construction activities. The protective fence shall be installed at a minimum of five feet beyond the tree canopy dripline. The intent of protection fencing is to prevent inadvertent limb/vegetation damage, root damage and/or compaction by construction equipment. The protective fencing shall be depicted on all construction plans and maps provided to contractors and labeled clearly to prohibit entry, and the placement of the fence in the field shall be approved by a qualified biologist prior to initiation of construction activities. The contractor shall maintain the fence to keep it upright, taut and aligned at all times. Fencing shall be removed only after all construction activities are completed.
- Pre-Construction Meeting: A pre-construction meeting shall be held between all site contractors and a registered consulting arborist and/or a qualified biologist. All site contractors and their employees shall provide written acknowledgement of their receiving sensitive natural community protection training. This training shall include, but shall not be limited to, the following information: (1) the location and marking of protected sensitive natural communities; (2) the necessity of preventing damage to these sensitive natural communities; and (3) a discussion of work practices that shall accomplish such.

During Construction

- Fence Monitoring: The protective fence shall be monitored regularly (at least weekly) during construction activities to ensure that the fencing remains intact and functional, and that no encroachment has occurred into the protected natural community; any repairs to the fence or encroachment correction shall be conducted immediately.
- Equipment Operation and Storage: Contractors shall avoid using heavy equipment around the sensitive natural communities. Operating heavy machinery around the root zones of trees would increase soil compaction, which decreases soil aeration and, subsequently, reduces water penetration into the soil. All heavy equipment and vehicles shall, at minimum, stay out of the fenced protected zones, unless where specifically approved in writing and under the supervision of a registered consulting arborist and/or a qualified biologist.
- Materials Storage and Disposal: Contractors shall not store or discard any construction materials within the fenced protected zones and shall remove all foreign debris within these areas. The contractors shall leave the duff, mulch, chips, and leaves around the retained trees for water retention and nutrient supply. Contractors shall avoid draining or leakage of equipment fluids near retained trees. Fluids such as gasoline, diesel, oils, hydraulics, brake and transmission fluids, paint,

paint thinners, and glycol (anti-freeze) shall be disposed of properly. The contractors shall ensure that equipment be parked at least 50 feet, and that equipment/vehicle refueling occur at least 100 feet, from fenced protected zones to avoid the possibility of leakage of equipment fluids into the soil.

- Grade Changes: Contractors shall ensure that grade changes, including adding fill, shall not be permitted within the fenced protected zone without special written authorization and under supervision by a registered consulting arborist and/or a qualified biologist. Lowering the grade within the fenced protected zones could necessitate cutting main support and feeder roots, thus jeopardizing the health and structural integrity of the tree(s). Adding soil, even temporarily, on top of the existing grade could compact the soil further, and decrease both water and air availability to the tree roots. Contractors shall ensure that grade changes made outside of the fenced protected zone shall not create conditions that allow water to pond.
- Trenching: Except where specifically approved in writing beforehand, all trenching shall be outside of the fenced protected zone. Roots primarily extend in a horizontal direction forming a support base to the tree similar to the base of a wineglass. Where trenching is necessary in areas that contain roots from retained trees, contractors shall use trenching techniques that include the use of either a root pruner (Dosko root pruner or equivalent) or an Air-Spade to limit root impacts. A registered consulting arborist shall ensure that all pruning cuts shall be clean and sharp, to minimize ripping, tearing, and fracturing of the root system. Root damage caused by backhoes, earthmovers, dozers, or graders is severe and may ultimately result in tree mortality. Use of both root pruning and Air-Spade equipment shall be accompanied only by hand tools to remove soil from trench locations. The trench shall be made no deeper than necessary.
- Erosion Control: Appropriate erosion control best management practices (BMPs) shall be implemented to protect preserved sensitive natural communities during and following project construction. Erosion control materials shall be certified as weed free.
- Inspection: A registered consulting arborist shall inspect the preserved trees adjacent to grading and construction activity on a monthly basis for the duration of the grading and construction activities. A report summarizing site conditions, observations, tree health, and recommendations for minimizing tree damage shall be submitted by the registered consulting arborist following each inspection.

Post-construction

- Mulch: The contractors shall ensure that the natural duff layer under all trees adjacent to construction activities shall be maintained. This would stabilize soil temperatures in root zones,

conserve soil moisture, and reduce erosion. The contractors shall ensure that the mulch be kept clear of the trunk base to avoid creating conditions favorable to the establishment and growth of decay causing fungal pathogens. Should it be necessary to add organic mulch beneath retained oak trees, packaged or commercial oak leaf mulch shall not be used as it may contain root fungus. Also, the use of redwood chips shall be avoided as certain inhibitive chemicals may be present in the wood. Other wood chips and crushed walnut shells can be used, but the best mulch that provides a source of nutrients for the tree is its own leaf litter. Any added organic mulch added by the contractors shall be applied to a maximum depth of 4 inches where possible.

- Watering Adjacent Plant Material: All installed landscaping plants near the preserved sensitive natural communities shall require moderate to low levels of water. The surrounding plants shall be watered infrequently with deep soaks and allowed to dry out in-between, rather than frequent light irrigation. The soil shall not be allowed to become saturated or stay continually wet, nor should drainage allow ponding of water. Irrigation spray shall not hit the trunk of any tree. The contractors shall maintain a 30-inch dry-zone around all tree trunks. An above ground micro-spray irrigation system shall be used in lieu of typical underground pop-up sprays.
- Monitoring: A certified arborist shall inspect the trees preserved on the site adjacent to construction activities for a period of two years following the completion of construction. Monitoring visits shall be completed quarterly, totaling eight visits. Following each monitoring visit, a report summarizing site conditions, observations, tree health, and recommendations for promoting tree health shall be submitted to the City. Additionally, any tree mortality shall be noted and any tree dying during the two-year monitoring period shall be replaced at a minimum 3:1 ratio on-site in coordination with the City.

Significance After Mitigation

Mitigation Measures 4.3-2(a) and 4.3-2(b) require the completion of a Habitat Mitigation and Monitoring Plan and a protected tree and tree canopy survey for any projects that require vegetation removal, ground disturbance, staging of vehicles, equipment, or materials, and access routes in riparian or other sensitive habitats, including urban tree canopies. Implementing these conditions for projects would reduce the potential for substantial adverse effect on these resources by avoiding, minimizing, and mitigating impacts through approval of site-specific mitigation plans or replanting plans prior to the issuance of a grading permit. However, as Mitigation Measures 4.3-2(a) and 4.3-2(b) would not apply to ministerial projects, the mitigation measures would not eliminate all potential impacts to sensitive habitats from implementation of the Project. Imposing the mitigation measures on all ministerial projects is not feasible based on the resources required to adopt and implement the requirement and based on the burden on urgently needed housing. Additionally, even with mitigation depending on the circumstances impacts may still result.

Therefore, the Housing Element Update would result in a ***significant and unavoidable*** impact after mitigation.

Threshold 4.3-3	Would the Proposed Project interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?

Impact 4.3-3 Policies and programs of the Safety Element Update would not adversely impact wildlife movement; therefore, impacts related to the Safety Element Update would be ***less than significant***. Housing development accommodated under the Housing Element Update would be primarily concentrated on sites in urban areas of the City that have been previously developed and disturbed. Nevertheless, development adjacent to or within native habitats and wildlife corridors is possible. Development of housing could result in significant direct and indirect impacts to local wildlife movement pathways along watercourses. Potential impacts related to the Housing Element Update would be ***significant and unavoidable***.

There are undeveloped areas within the City that are located adjacent to large tracts of native habitat (e.g., Santa Monica Mountains, Griffith Park, Sullivan Canyon), which provide vegetative cover suitable for the movement of many terrestrial wildlife species, including medium to large-sized, mobile mammals with relatively large home ranges, such as coyote, deer, bobcat, grey fox, and mountain lion, and also provide foraging and breeding habitat for many species. Wildlife species can move through these vegetated areas routinely with some species also using concrete-lined or earthen stormwater channels in the area for movement.

As previously discussed under Impacts 4.3-1 and 4.3-2, housing development could potentially occur within areas that support sensitive habitat (e.g., riparian areas, SEAs, undeveloped natural areas). Within these areas, potential development generally would be limited to improvements associated with low density residential uses, ADUs or conversions, depending on the zoning and land use designation of the parcels.

Direct and indirect disturbances to these areas could potentially interfere with the movement of native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors within the City as described in *Protected Areas for Wildlife & Wildlife Movement Pathways, Final Report* (ESA 2021).

Fragmentation of habitat by roads and development within the Santa Monica Mountains is already a serious issue, and retaining existing connectivity (e.g., roadless area) between large undeveloped areas is considered important for the long-term viability of wildlife populations in the Santa Monica Mountains, and therefore is very desirable from the standpoint of conservation planning.

Even in more urbanized locals such as South Los Angeles and the Harbor Area, there are pockets of natural areas that are considered native wildlife nursery sites (e.g., Baldwin Hills, South LA Wetlands Park, Banning Park, and Harbor Lake). These areas have the potential to support nesting birds and other breeding wildlife. Development projects are required to comply with CFGC sections (e.g., Sections 3503, 3503.5, 3513, and 4150); thus, it is unlikely that housing development accommodated under the Housing Element Update would result in the disturbance or destruction of active nest sites or the unauthorized take of birds or nongame mammals. Nevertheless, if development activities directly (e.g., cutting of trees or other vegetation, or removal of man-made structures containing an active bird nest or denning wildlife) or indirectly (e.g., if activities sufficiently harassed birds to cause nest abandonment) affect nesting birds and nongame mammals, a violation of the Fish and Game Code would result.

Based on the above, housing development accommodated by the Housing Element Update could potentially interfere with the movement of any native resident or migratory fish or wildlife species or within established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites. Additionally, the Project could result in development on parcels that may contain suitable nesting habitat for birds. Therefore, impacts to native resident, migratory fish and wildlife; established native resident or migratory wildlife corridors; or native wildlife nursery sites would be potentially significant.

Potential impacts by housing category is described below.

- **Multi-family residential**: Multi-family residential projects may range in size from small apartment buildings with 2-10 units to larger apartment buildings and high-rise structures with hundreds of units. Multi-family developments of any size could potentially cause direct impacts, which may include the development within or abutting natural areas (i.e., wildland-urban interface). If sited within or adjacent to natural areas, then large multi-family development projects may have the potential to result in more substantial impacts due to their greater footprint and scale.
- **Single-family residential:** Single-family residential projects may range in size and scale from one-story single-family homes to multi-story single-family homes, and from small-lot subdivisions to multi-lot residential subdivisions. Direct impacts could result from development on a property containing or adjacent to natural, open space areas or areas suitable for wildlife movement.

As listed in Table 4-2, the Hidden Creek Estates EIR project involved a proposal to annex the project site into the City of LA and subdivide the site to create 188 single-family residential lots, a public park, and an equestrian center. The EIR found the following potential impacts related to this impact criteria:

> *While movement along Browns Canyon is locally important, the development of the upland areas above both Browns and Mormon Canyon on the project site would not prevent movement, although it will hinder movement of those species not adaptable to close proximity to urban development. The Deerlake Ranch development, which is located to the southwest of the project site, has been approved for residential development by Los Angeles County. This site was previously owned by the Santa Monica Mountains Conservancy and sold to a developer with a conservation easement through Devil's Canyon to accommodate local wildlife movement. This design of this project is comparable to the project in that residential development is confined to the upland mesas while leaving the lower Browns and Mormon Canyons with little or no development. As such, local wildlife movement north and south within Browns and Mormon Canyons will be allowed to continue with the primary potential effect of the project being indirect impacts from night lighting and urban noises (e.g., vehicles traveling on the Mason Avenue extension). These impacts are considered to be less than significant due to the vertical and horizontal separation between the proposed residential lots and the Mason Avenue extension bridge and Browns and Mormon Canyons.*
>
> *A fence is planned on the north side of the Mason Avenue extension east of Mormon Creek to restrict access to the natural gas storage fields located to the northeast of the project site. This fence has the potential to limit wildlife movement from the area east of the proposed Mason Avenue extension and portions of Mormon Canyon south of the fence. Mitigation Measure* ***MM-BIO-2****3 is proposed to mitigate this impact to less than significant by requiring that access be provided to wildlife at appropriate locations.*

The following mitigation was imposed on the project:

> *MM-BIO-23. The proposed fence to be located on the north side of the Mason Avenue extension, east of Mormon Creek shall be designed to allow wildlife movement at key points along the fence. A qualified biologist shall submit written approval of the fence design to the City prior to receiving grading permits.*

- **ADUs**: ADUs include attached ADUs created through a building addition or conversion of existing floor area and detached ADUs of various scales. The development of an ADU would be less likely than other development types to involve direct or indirect impacts to sensitive habitat because these developments would be limited to areas currently developed or disturbed (i.e., urban). ADUs sited in undeveloped, or less developed, portions of the City (e.g., hillside areas), however, would have the potential to affect wildlife movement, including impacts associated directly and indirectly with runoff and/or water quality and the introduction of light and noise pollution into natural habitats.
- **Mixed use development**: Mixed use development could range in size and scale from neighborhood commercial mixed use with smaller nonresidential uses, to high-rise mixed-use with larger

nonresidential uses. Mixed use development would likely in urban areas; however, in the event that mixed use development occurred adjacent to native habitats and potential wildlife corridors, direct impacts could result from development on a property containing or abutting suitable habitat. Large-scale mixed use projects in urbanized areas would have no impact, but such developments may have the potential to indirectly affect wildlife movement if sited in or adjacent to undeveloped areas.

- **Conversion and/or rehabilitation**: Existing nonresidential, residential and mixed use structures could be converted or rehabilitated for new residential uses. Such projects are not expected to result in significant impacts to wildlife movement because this type of development would occur in previously disturbed areas.

Safety Element

The Proposed Project includes targeted updates to the Safety Element that would integrate goals, policies, and objectives from other citywide long-range planning documents into the General Plan. The policies associated with biological resources would aim to comply with existing policies under the Conversation and Open Space Elements to maintain green space, and develop and implement procedures to protect sensitive species from potential hazards associated with hazard mitigation and disaster recovery efforts. Therefore, these updates would not interfere substantially with the movement of any native resident or migratory fish or wildlife species or adversely impact wildlife nursery site, and potential impacts to biological resources under the Safety Element Update would be ***less than significant***.

Mitigation Measures

See Mitigation Measure 4.3-1.

Significance After Mitigation

To avoid impacts to wildlife corridors and the wildlife that rely on them, all potential wildlife movement pathways, including those with existing obstacles and constrictions, such as roads, pipelines, aqueducts, and landscaped or otherwise altered terrain, must be identified and evaluated. While the measures identified under the Mitigation Measure 4.3-1 would help to reduce potential impacts to wildlife movement and nursery sites, projects sited within or adjacent to these areas have the potential to generate adverse edge effects that could significantly reduce the use of surrounding habitats by wildlife for movement through the area. Thus, encroachment (e.g., night lighting, domestic animals, and urban noises) into these areas would reduce the overall size and function of the wildlife movement corridor or nursery site.

Furthermore, as Mitigation Measure 4.3-1 would not apply to ministerial projects, the mitigation measures would not eliminate all potential impacts to special-status species from implementation of the project.

Additionally, even with mitigation measures imposed depending on circumstances, impacts may still occur. Therefore, the Housing Element Update would result in a ***significant and unavoidable*** impact after mitigation.

Threshold 4.3-4	Would the Proposed Project conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?

Impact 4.3-4 The Housing Element Update and Safety Element Update would not conflict with applicable goals or policies of the City's General Plan Framework or Conservation Element, the City's Tree Preservation Ordinance, or the Los Angeles River Revitalization Master Plan. Impacts would ***be less than significant***

Housing development accommodated under the Housing Element Update would occur in areas on private property, street rights-of-way, and open space areas that are known and/or expected to have protected tree species. Housing development occurring within the City would be required to comply with the City's Tree Preservation Ordinance, which makes it illegal to relocate, remove, or fatally harm the trees without the issuance of a permit. The Housing Element Update and Safety Element Update do not include any components that would preclude implementation of or alter the requirements and procedures contained under this ordinance in any way.

Protected Trees

As described in Section 4.3.2, CNPS and CDFW maintain lists of taxa that have been evaluated for distribution, abundance, threats, and other characteristics that contribute to rarity and endangerment (e.g., CNPS Inventory of Rare and Endangered Plants). These lists include plants that have been ranked per the CRPR system, which is a ranking system originally developed by the CNPS to better define and categorize rarity in California's flora. All plants tracked by CDFW's CNDDB are assigned to a CRPR category (e.g., CRPR 1, 2, 3, and 4).

Taxa on the CRPR lists are evaluated by taxon experts who assign a CRPR based primarily on number of occurrences, distribution, and level of threat. CNPS and CDFW maintain that all CRPR 1 and CRPR 2 taxa meet the definition of endangered, rare, or threatened under CEQA Section 15380 and must be evaluated during CEQA review. CEQA Section 15380(b) defines a species of plant as "Endangered" when its survival and reproduction in the wild are in immediate jeopardy from one or more causes, including loss of habitat, change in habitat, overexploitation, predation, competition, disease, or other factors; "Rare" when either: (A) Although not presently threatened with extinction, the species is existing in such small numbers throughout all or a significant portion of its range that it may become endangered if its environment worsens; or (B) The species is likely to become endangered within the foreseeable future throughout all or

a significant portion of its range and may be considered "threatened" as that term is used in the Federal Endangered Species Act.

CNPS currently considers southern California black walnut (Juglans californica) a List 4 plant (CRPR 4.2). CRPR 4 species do not meet the definition under CEQA Section 15380(b) as an Endangered, Rare or Threatened Species ("special-status"). Information for these species is often limited due to the difficulty in obtaining current data on the number and condition of the occurrences and few if any of these CRPR 4 species are eligible for state listing (CNPS 2021). CRPR 4 plants may be considered to be rare species if they occur in less than two California counties or if they are of local concern (WRA 2013). Moreover, according to CNPS, southern California black walnut occurs in 12 California counties and spans over 130 USGS 7.5-minute quadrangles. CDFW does not include southern California black walnut in their State and Federally Listed Endangered, Threatened, and Rare Plants of California (CDFW 2021). Therefore, according to both CNPS and CDFW, southern California black walnut does not meet their criteria as List 1 or 2 species or as Endangered, Threatened, and Rare Plants of California, respectively.

The City of Los Angeles identifies southern California black walnut as a protected tree species in accordance with Article 2 and 7 of Chapter I and Article 6 of Chapter IV and Section 96.303.5 of the Los Angeles Municipal Code (Ordinance 177404, "Protected Tree Ordinance"). In adopting that ordinance, the City did not make a determination that the California black walnut is rare in the City or otherwise and the City has not conducted any survey or study to make such a determination. In accordance with the Protected Tree Ordinance, the City requires that southern California black walnut trees that measure four inches or more in cumulative diameter, four and one-half feet above the ground level at the base of the tree that would be removed by a project be mitigated at a 1:1 ratio with a 15-gallon replacement tree. Based on the above, there is no evidentiary basis to find that the California black walnut is rare in the City, the County or the State.

In contrast to individual California black walnut trees, the CDFW considers California black walnut vegetation communities (e.g., California black walnut woodland) a sensitive natural community (CDFW 2020). According to CNPS:

> *"Walnut forest is a much fragmented, rare, and declining vegetation community. Threatened by urbanization, grazing, non-native plants, and possibly by lack of natural reproduction. Possibly threatened by hybridization with horticultural varieties of walnut." (CNPS 2021)*

In accordance with mitigation measure BIO-4.3-2(a), impacts to walnut vegetation communities shall be mitigated through the preparation and implementation of a Habitat Mitigation and Monitoring Plan

(HMMP). The HMMP shall mitigate for impacts to CDFW jurisdictional habitat at a 2:1 ratio for permanent impacts and a 1:1 ratio for temporary impacts, or as otherwise approved by CDFW and the City.

Furthermore, assertion that a plant is rare without detailed studies can lead to unwarranted and costly expenditures for local government, non-profit groups, and other stakeholders, particularly in cases of infill development. In the case of southern California black walnut, adopted ordinances and/or policies suffice to protect and/or compensate for impacts to individual protected trees.

Consistent with current City requirements, future development occurring under the project would be required to comply with the City's Tree Preservation Ordinance. Therefore, impacts related to local policies or ordinances protecting biological resources would be ***less than significant***.

None of the case studies in Table 4-2 had significant unavoidable impacts related to conflicts with local policies or ordinances to protect biological resources.

Safety Element

The Proposed Project includes targeted updates to the Safety Element that would integrate goals, policies, and objectives from other citywide long-range planning documents into the General Plan. The policies associated with biological resources would aim to comply with existing policies under the Conversation and Open Space Elements to maintain green space, and develop and implement procedures to protect sensitive species from potential hazards associated with hazard mitigation and disaster recovery efforts. Nothing in the Safety Element Update would affect existing Protected Tree Ordinance. Therefore, these updates would not conflict with any local policies or ordinances protecting biological resources, and potential impacts to biological resources under the Safety Element Update would be ***less than significant.***

Mitigation Measures

No mitigation measures are required.

Cumulative Impacts

The geographic area to analyze cumulatively considerable biological resource impacts includes the City and immediately adjacent areas that could be directly and indirectly affected. This analysis evaluates whether housing development accommodated under the Housing Element Update in the City, when considered together with other past, existing, and planned future development (non-housing), could result in a significant cumulative impact on biological resources in the region. The Housing Element Update would be implemented over eight years; therefore, the cumulative impact analyses for the various resources are limited to the identification of the types of impacts that may occur as described below.

Sensitive Species and Habitats, including Riparian Habitats

Based on the impact analysis provided above, the Housing Element Update and Safety Element Update contribution to biological resources would be cumulatively considerable. As development occurs in the lesser or undeveloped portions of the City, habitat for biological resources will continue to be converted to urban development. It is understood that mobile species (e.g., most reptiles, mammals, and birds) may survive this development by moving to other areas, but less mobile species (i.e., species reliant on a certain type of habitat) would not. Conversion of natural habitat will reduce the availability of habitat for special-status species and the natural areas remaining will likely be isolated and not support biological resources beyond their carrying capacity. Buildout of the Housing Element would result in the increase of urban buildout and contribute to the loss of habitat for special-status species, as well as common species. Therefore, the Housing Element contribution to the cumulative loss of habitat would be cumulatively considerable

Citywide development generally would not affect sensitive plant or animal species since Los Angeles is largely urbanized and the General Plan Housing Element and other policy documents primarily emphasize infill development in already urbanized areas that lack native biological habitats. Nevertheless, individual projects may adversely affect sensitive species and habitats, including wetlands, and such impacts would be addressed on a case-by-case basis as part of project-level environmental reviews. However, as stated, ministerial projects would not be subject to environmental review. Thus, cumulative impacts to special-status species and would be significant.

In addition, trees located throughout the City could potentially support migratory birds. Habitat for migratory birds can be quantified using tree canopy coverage. Canopy cover is a landscape variable that influences excavated tree cavity availability. Changes in tree canopy coverage over time include tree losses due to development as well as tree maturation and planting. Trees and tree cavities are used by a wide variety of species for nesting, food storage, and cover. Most studies on cavity availability have been conducted in forests, and little is known about urban areas. With urbanization, species that excavate cavities may be less abundant, natural tree-decay processes are managed, and tree densities are reduced, all of which may influence tree-cavity availability (LaMontagne et al 2015). Research suggests that birds' breeding success relies on the trade-off between the benefit and the expense of specific stresses from habitats. Nest site selection of birds is also affected by the life habit of urban predators (e.g., domestic cats). Furthermore, competition among species can influence their distributions and utilization of environmental resources when birds nest in cities (Han et al. 2019).

The effects of urbanization on bird communities are well documented, with studies indicating that total and native species richness decline at high levels of development; however, individual species display

differing responses to urbanization. For example, some birds reach peak densities in urban or suburban settings, while others reach peak densities at natural sites (Reale and Blair 2005). According to Blair (2001), "the cumulative response of individual species to urbanization also results in changes at the level of the bird assemblage." This assemblage leads to "urban exploiters" like European starlings (*Sturnus vulgaris*) and house sparrows (*Passer domesticus*) based on their higher abundance at the urban end of the gradient and "urban avoiders" such as ovenbirds (*Seiurus aurocapilla*) based on their high abundance at the natural end of the gradient and their complete absence from the urban end (Reale and Blair 2005). Thus, "nesting success—determined by nest site availability and the ability to produce multiple broods—may drive the distribution of avian species along an urbanization gradient, and that nesting site is a critical resource that regulates the distribution of birds in urban environments. (Reale and Blair 2005)" However, given the urban setting most species encountered within the Plan Area are urban exploiters and would not be significantly adversely affected by foreseeable development under the Housing Element. Therefore, the Housing Element would not contribute to cumulatively considerable impacts related to bird nest disturbance.

Based on the above information, cumulative impacts to sensitive species and habitats, including riparian habitats, could occur citywide, and although the incremental contribution of housing development accommodated under the Housing Element to cumulative impacts to sensitive species and habitats may be reduced through mitigation, the potential for impacts still exist. Impacts from the Housing Element Update will be cumulatively considerable impacts related to special-status species, wildlife movement, and sensitive habitats. Therefore, cumulative impacts would be significant and unavoidable.

Protected Trees

In accordance with the City of Los Angeles Protected Tree Ordinance and Sections 17.02, 17.05, 17.06 and 17.52 of the Municipal Code, the following tree species with a cumulative trunk diameter at breast height (DBH) of four inches or greater are considered Protected Trees: native oak trees (*Quercus* sp.); western sycamore (*Platanus racemosa*); Southern California black walnut (*Juglans californica var. californica*); and California bay (*Umbellularia californica*). In addition, the Department of City Planning requires the identification of the location, size, type, and condition of all existing trees on a site with a DBH of 8 inches or greater, which are referred to as non-protected significant trees. All housing development accommodated under the Housing Element Update in the City would also be subject to these existing ordinances and regulations. Compliance with the Tree Preservation Ordinance would ensure that there would be no conflict with the City's Ordinance. Based on this information, the incremental effect of housing development under the Housing Element is not cumulatively considerable and cumulative impacts related to Protected Tree Ordinance and other local policies would be less than significant.

Wildlife Movement

As discussed under Impacts 4.3-3, housing development accommodated under the Housing Element Update could potentially occur within areas that support sensitive habitat (e.g., riparian areas, SEAs, undeveloped natural areas). Within these areas, potential development generally would be limited to improvements associated with low density residential uses, ADUs or conversions, depending on the zoning and land use designation of the parcels; however, direct and indirect disturbances to these areas could potentially interfere with the movement of native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors within the City. Additionally, the Project could result in development on parcels that may contain suitable nesting habitat for birds. Therefore, impacts to native resident, migratory fish and wildlife; established native resident or migratory wildlife corridors; or native wildlife nursery sites would be potentially significant.

Measures recommended to mitigate potential impacts on sensitive natural resources and wildlife movement would serve to address much of the project contribution to cumulative impacts. For example, conversion of natural areas to residential development could diminish a portion of an existing wildlife foraging habitat. Because the Proposed Project has the potential to significantly impact wildlife movement on a local or regional scale by itself; thus, when taken together with other foreseeable projects in the area, cumulative impacts to wildlife movement are considered significant and unavoidable.

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4.4 CULTURAL RESOURCES

This section evaluates impacts to cultural resources associated with the Housing Element Update. Cultural resources under CEQA include archaeological sites (both prehistoric and historic) and built environment resources (including buildings, structures, water conveyance systems, etc.). As discussed in the Initial Study (see Appendix A), impacts to human remains were found to be less than significant and were, therefore, scoped out of this EIR. In addition, all impacts from the Safety Element Update associated with cultural resources were found to be less than significant in the Initial Study and are subsequently not discussed in this EIR. This section was prepared utilizing documents prepared by the City of Los Angeles Office of Historic Resources (OHR) and City of Los Angeles Historic Resources Survey (SurveyLA) program and other published sources.

4.4.1 ENVIRONMENTAL SETTING

Existing Conditions - Regional Setting

Prehistory

The prehistoric chronological sequence that is applicable to near-coastal and many inland areas in southern California are generally divided into four periods: Early Man, Milling Stone, Intermediate, and Late Prehistoric. The Early Man - Horizon I period (ca. 10,000 – 6,000 B.C.) is represented by numerous pre-8,000 B.C. sites identified along the mainland coast and Channel Islands. Early Man - Horizon I sites are generally associated with a greater emphasis on hunting than in later periods, though recent data indicates that the economy was a diverse mixture of hunting and gathering, including a significant focus on aquatic resources. The Milling Stone – Horizon II period (ca. 6,000 – 3,000 B.C.) is characterized by subsistence strategies centered on collecting plant foods and small animals, including an apparent importance of seed processing suggested by the appearance and abundance of stone grinding implements, namely milling stones and handstones. The Intermediate – Horizon III period (ca. 3,000 B.C. – A.D. 500) is characterized by a shift toward a hunting and maritime subsistence strategy, along with a wider use of plant foods. A pronounced trend occurred toward greater adaptation to regional or local resources including an increased variety and abundance of fish, land mammals, and sea mammals along the coast. Tool kits for hunting, fishing, and processing food and other resources reflect this increased diversity, with larger knives, flake scrapers, shell fishhooks, and drill-like implements, and various projectile points being more common than in the preceding period. An increase in mortars and pestles also became more common, indicating an increasing reliance on acorns. The Late Prehistoric – Horizon IV period (ca. A.D. 500 – European Colonization) experienced further increase in the diversity of food resources demonstrated by more classes of artifacts, including finely sharpened projectile points associated with usage of the bow and arrow. Other

items include steatite cooking vessels and containers, a variety of bone tools, and personal ornaments made from shell, bone, and stone. During this period, there was also an increase in population size accompanied by the advent of larger, more permanent villages.

Ethnography

Los Angeles is in an area traditionally occupied by the Native American group known as the Gabrieleño. The name Gabrieleño was applied by the Spanish to those natives that were attached to Mission San Gabriel. Today, most contemporary Gabrieleño prefer to identify themselves as Tongva. Tongva territory included the Los Angeles basin and southern Channel Islands as well as the coast from Aliso Creek in the south to Topanga Creek in the north. The Tongva language belongs to the Takic branch of the Uto-Aztecan language family, which can be traced to the Great Basin region.

The Tongva established large permanent villages and smaller satellite camps throughout their territory. Society was organized along patrilineal non-localized clans, a common Takic pattern. Tongva subsistence was oriented around acorns and supplemented by roots, leaves, seeds, and fruits of a wide variety of plants. Meat sources included large and small mammals, freshwater and saltwater fish, shellfish, birds, reptiles, and insects. Tongva employed a wide variety of tools and implements to gather and hunt food. The digging stick, the bow and arrow, traps, nets, blinds, throwing sticks and slings, spears, harpoons, and hooks were common tools. Like the Chumash, the Tongva made oceangoing plank canoes (known as ti'at) capable of holding six to 14 people and used for fishing, travel, and trade between the mainland and the Channel Islands.

History

Spanish settlement of Los Angeles began with the founding of the pueblo in 1781 and the arrival of eight families that began changing the land by erecting shelters and planting small agricultural plots. The inhabitants of the pueblo, or *pobladores*, directed the local Tongva to construct the Zanja Madre, or "Mother Ditch," to transport water between the Los Angeles River and the pueblo. By 1818, the population of the pueblo had grown to nearly 600. With the transition from Spanish to Mexican rule in 1821 and the deeding of large ranchos, the Los Angeles pueblo saw a new wave of prosperity and increased population. By 1835, its status was officially changed from "pueblo" to "ciudad," or city (Architectural Resources Group 2016).

After the end of the Mexican-American War and the signing of the 1848 Treaty of Guadalupe Hidalgo, American settlers began to flood into the Los Angeles area. The City's first official survey was completed by Lieutenant Edward O.C. Ord in 1849, delineating a network of streets and blocks in and around the plaza and serving as a basis for future development in downtown Los Angeles. Although the City was

experiencing growth, it remained a relatively remote community in the early years of statehood (Architectural Resources Group 2016).

In the last quarter of the nineteenth century, Los Angeles experienced a period of intense growth sparked by the development of railroad lines to and from Los Angeles connecting the City and the rest of Southern California. Between 1868 and 1869 the Central City area was connected with port facilities at San Pedro, and in 1876, the Southern Pacific Railroad completed a line connecting Los Angeles to San Francisco. By 1885, the Atchison, Topeka, and Santa Fe Company completed a line from the East Coast to Los Angeles, providing a more direct connection for travel and trade. Downtown Los Angeles saw substantial new development as the City emerged as a major regional economic center, leading to the construction of numerous office buildings, hotels, and other commercial structures. Improved rail connections also led to a major real estate boom in the 1880s (Deverell 1994; Architectural Resources Group 2016). By 1900, the resulting residential development pushed the City's population to 102,000 people.

Rapid, sustained expansion in the region characterized the first three decades of the twentieth century. Over this period the population of Los Angeles grew to over 2.2 million. Two major events had a lasting influence on growth throughout the region. The first was the selection of San Pedro Harbor as the international Port of Los Angeles, a factor that undergirded the emergence of significant local oil, automotive, and aviation industries in Los Angeles and neighboring communities. Second, William Mulholland's Los Angeles Aqueduct opened in 1913, providing a reliable source of water to what would soon become the largest city on the West Coast. Continued growth of the City's residential districts was aided further by the network of the Pacific Electric Railway trolley line, also known as the "Big Red Cars," which linked the region's emerging "streetcar suburbs" to an emerging Central Business District and the neighboring industrial zone (California Department of Transportation [Caltrans] 1982; City of Los Angeles 2018; Los Angeles Conservancy 2013). By the 1920s, the growing popularity of the automobile allowed developers to build new suburban subdivisions even farther from downtown Los Angeles and other employment centers (Hise and Gish 2007). Despite the City's rapid urbanization, many areas, such as the San Fernando Valley, remained predominantly rural and agricultural through World War II (Architectural Resource Group 2016).

Although the City's growth slowed during the Great Depression, the relative success of the oil, automobile, motion picture, and aviation/aeronautics industries offered some protection from the ill effects of the economic downturn. The onset of World War II ended the depression unequivocally and provided a boost to the City's manufacturing sector. New factories were established along rail corridors, including an important concentration of facilities constructed in the San Fernando Valley. Defense-related industrial expansion during World War II and the emergence of an expansive aeronautics and aerospace industry in southern California contributed to another population boom during and immediately after the war.

Between 1940 and 1950, Los Angeles added more than 400,000 new residents (Architectural Resource Group 2016; City of Los Angeles 2018).

By the postwar period, the transformation of Los Angeles County (County) from its place in the nineteenth century as "Queen of the Cow Counties" to the epicenter of the aerospace industry was complete (City of Los Angeles 2018). Aircraft manufacturing in particular became a significant magnet for new residents and workers, prompting the construction of extensive suburban tracts. Postwar highway projects played an important role in the County's suburban expansion by making it possible to live ever-further from the workplace. One such project included the construction of Hollywood Freeway, which linked the rapidly urbanizing San Fernando Valley to downtown Los Angeles by means of a modern, multi-lane highway. The rise of the suburbs coincided with a decline in development in the central business district. As white residents fled the "blighted" urban core for the new suburbs, businesses followed suit. Amid tighter global competition, local manufacturing also began a gradual decline in the late 1960s and 1970s (Architectural Resources Group 2016; City of Los Angeles 2018). Despite this, the aerospace, technology, entertainment, and tourism experienced continued to buoy Los Angeles' economy. As of 2019, the County population is approximately 10 million, with just over four million living in the City of Los Angeles.

Existing Conditions – Local Setting

Cultural Resources

Los Angeles contains a wide range of cultural resource types spanning the entire history of Los Angeles from pre-colonization, through the Spanish pueblo era, the Mexican era, and the American era. Cultural heritage can be generally categorized as "tangible" or "intangible." Tangible cultural heritage includes the movable and immovable physical representations of heritage, including objects, archaeological sites, buildings, structures, districts, and landscapes. Intangible cultural heritage includes those aspects of heritage that are more ephemeral, such as events, traditions, organizations, knowledge, and the interaction between communities and their environment. Intangible cultural heritage is not a regulated category and intangible resources cannot be identified as historical resources under CEQA, but they can inform the significance of tangible cultural resources.

SurveyLA

SurveyLA is a citywide survey program that identifies and evaluates and identifies potential built-environment resources and historic districts for National Register of Historic Places (National Register), California Register of Historical Resources (California Register), and local listing. As part of SurveyLA, Historic Resources Survey Reports have been for prepared to document historic resources in the City's 35 Community Plan Areas (CPA), and SurveyLA data is continually updated by the Los Angeles OHR.

SurveyLA surveyed more than 880,000 properties and has identified thousands of built-environment resources that are potentially eligible for national, state or local listing that are located throughout Los Angeles. SurveyLA data is available on the HistoricPlacesLA.org webportal.

Redevelopment Area Historic Resources Surveys

The former Community Redevelopment Agency of the City of Los Angeles (CRA/LA) has produced historic resources studies covering seven redevelopment areas, including the Adelante Eastside, Hollywood, Normandie 5, Northeast Los Angeles River, San Pedro Commercial Center, Westlake Recovery, and Wilshire Center and Koreatown recovery Redevelopment Areas. The purpose of the studies was to identify previously designated and potentially eligible historical resources throughout each Redevelopment Area in order to inform planning decisions. Reports document intensive-level field surveys identifying individual properties, non-parcel resources (such as air raid sirens or street trees), and historic districts throughout the Redevelopment Areas that were previously designated or recommended eligible for National Register, California Register, or local listing.

Previously Identified Historical Resources

In all, the California Office of Historic Preservation Built Environment Directory (BERD) identifies more than 15,000 properties or historic districts that have been evaluated for national, State, or local designation. Data available through the National Register identifies approximately 220 resources listed at the national and state levels, and the City has designated more than 1,100 Historic Cultural Monuments (HCM).[1] Substantial concentrations of known and potential resources are present in several community plan areas, including Bel Air - Beverly Crest, Central City, Central City North, South Los Angeles, Venice, West Adams - Baldwin Hills - Leimert, Westlake, Westwood, and Wilshire.[2]

Historic Preservation Overlay Zones

The City of Los Angeles' Historic Preservation Overlay Zone (HPOZ) program is intended to "protect the distinctive architectural and cultural resources of Los Angeles's historic neighborhoods" through the establishment of historic districts (City of Los Angeles 2021). The designation of a neighborhood as an HPOZ ensures the preservation of an area's historical character by augmenting design review standards for new construction projections. There are 35 HPOZs in the City of Los Angeles.[3] The locations of HPOZs in each of the City's seven Area Planning Commissions (APC) (i.e., West Los Angeles, South Valley, South

[1] Resources listed in the National Register are automatically listed in the California Register. A spreadsheet detailing resources listed in the National Register can be downloaded at https://www.nps.gov/subjects/nationalregister/data-downloads.htm. The estimated number of City of Los Angeles HCMs is available at https://planning.lacity.org/preservation-design/historic-landmark-programs.
[2] A map of historic resources in the City can be found at: http://historicplacesla.org/map.
[3] A list of City of Los Angeles HPOZs can be found at: https://planning.lacity.org/preservation-design/local-historic-districts

Los Angeles, North Valley, Harbor, East Los Angeles, and Central) are depicted in Figure 4.4-1 through Figure 4.4-7.

Historic-Cultural Monuments

The City's OHR has recorded more than 1,100 HCMs throughout the City, officially recognizing and providing protection to some of Los Angeles' historic resources.[4] The HCM list is continually updated as new resources are designated. The locations of known HCMs in each of the City's seven APCs are depicted in Figure 4.4-1 through Figure 4.4-7.

Archaeological Sites

Prehistoric and historic archaeological sites are known to exist throughout the City. The statewide Historical Resources Inventory (HRI) is not available for public review according to the *California Historical Resource Information System Information Center Rules of Operation Manual* (Section III.A). The HRI would be consulted after the determination of a development site boundary under project-level analysis for development associated with build out of the RHNA under the Housing Element Update. Thus, precise locations and numbers of archaeological sites that may be affected by the Proposed Project are not known at this time. Archaeological sites of Native American origin are known to exist throughout the City of Los Angeles. Historic archaeological sites are also known to exist throughout the area and include sites associated with the Spanish settlement, Mexican settlement of the area, and early American settlement and the establishment of the City.

[4] A list of HCMs can be found at: https://planning.lacity.org/odocument/24f6fce7-f73d-4bca-87bc-c77ed3fc5d4f/Historical%20Cultural%20Monuments%20List.pdf

Figure 4.4-1 West Los Angeles Area Planning Commission

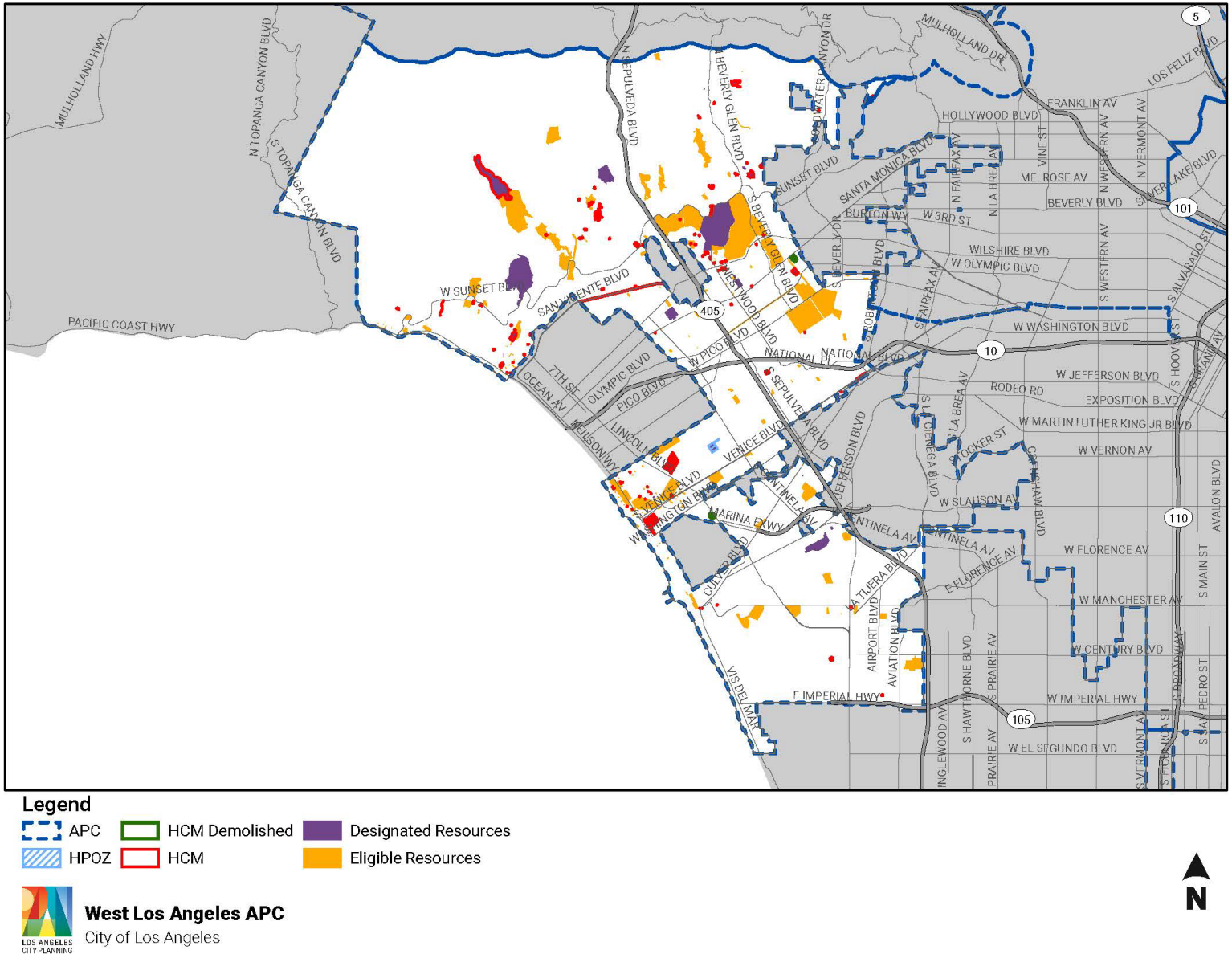


Figure 4.4-2 South Valley Area Planning Commission

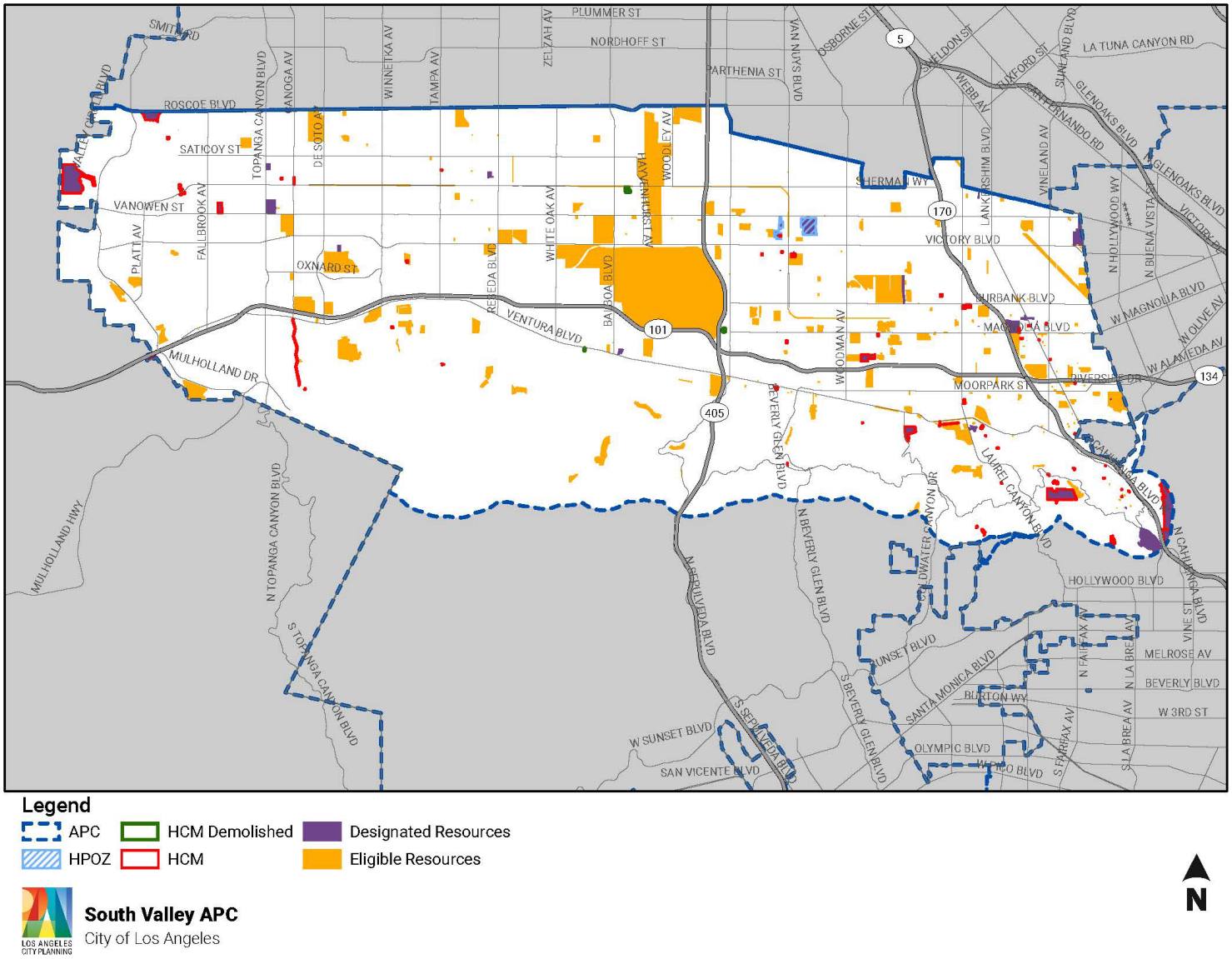


Figure 4.4-3 South Los Angeles Area Planning Commission

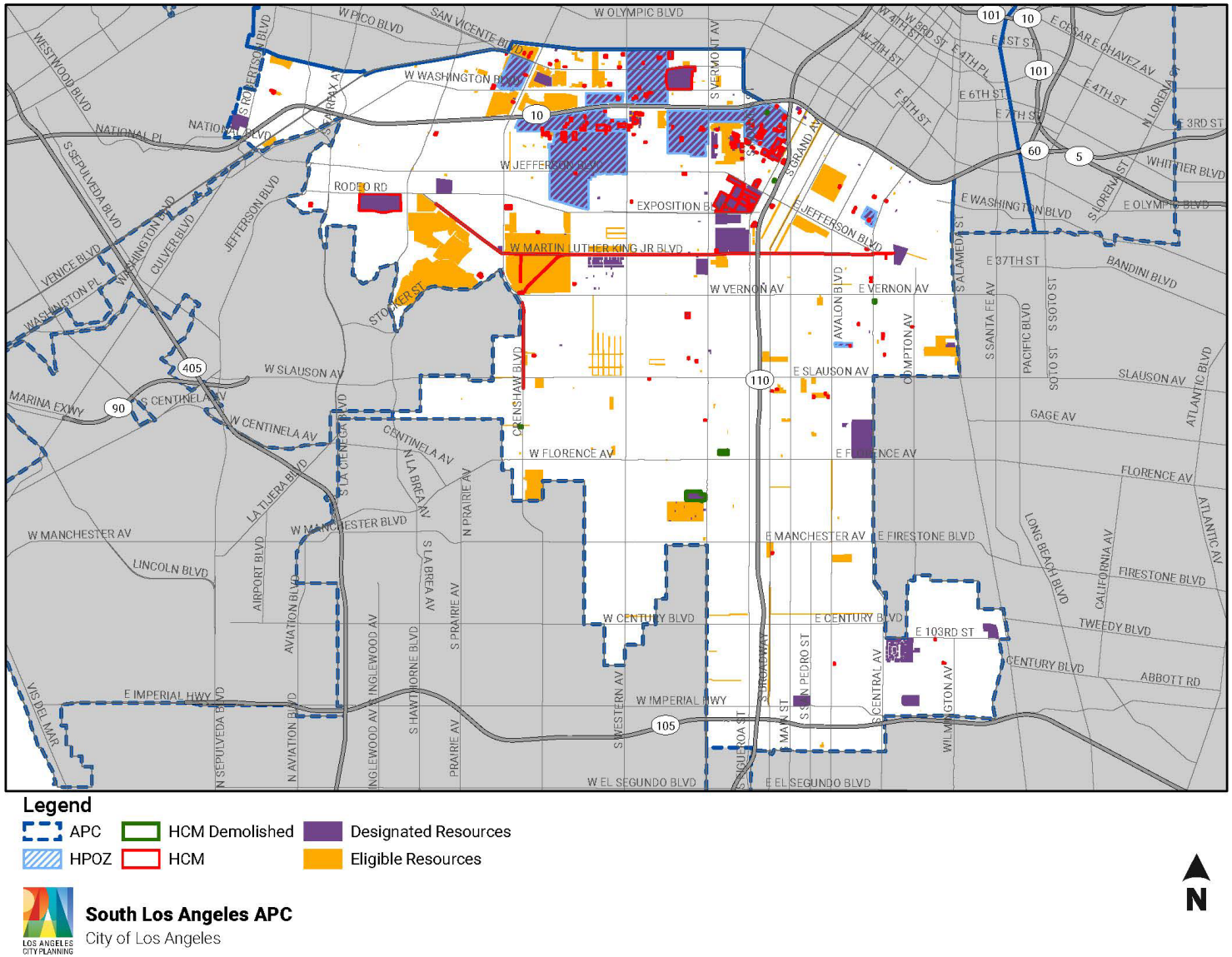


Figure 4.4-4 North Valley Area Planning Commission

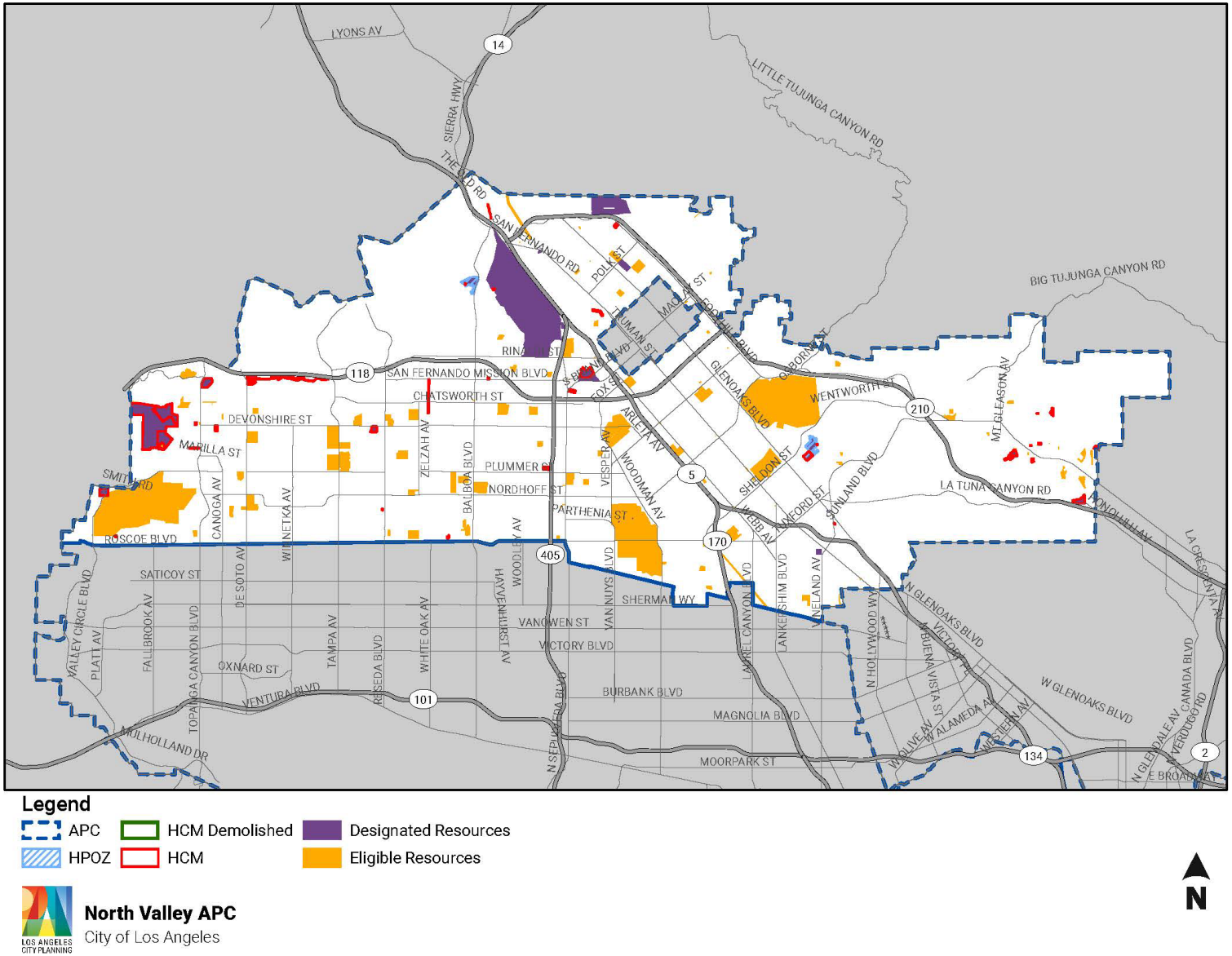


Figure 4.4-5 Harbor Area Planning Commission

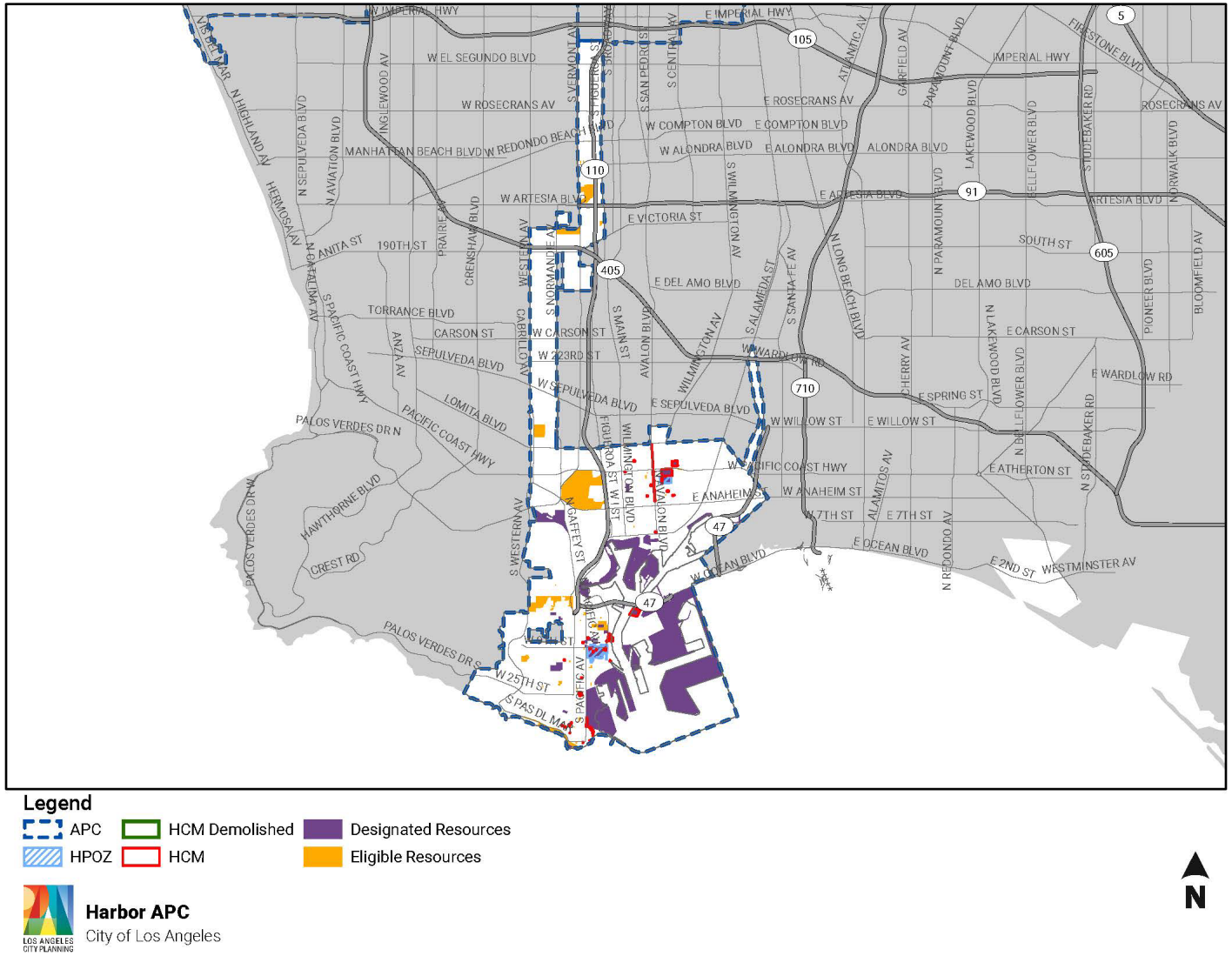


Figure 4.4-6 East Los Angeles Area Planning Commission

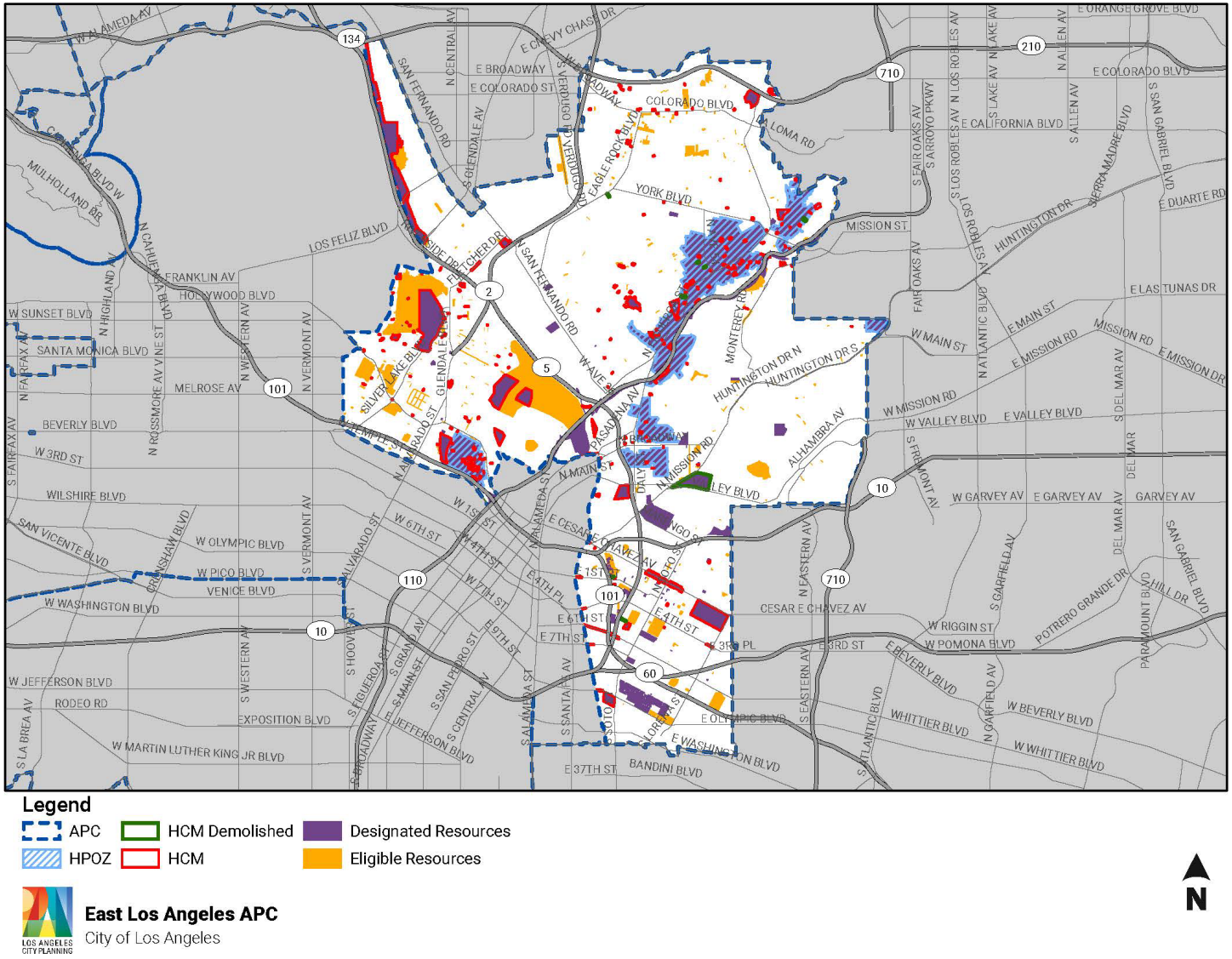
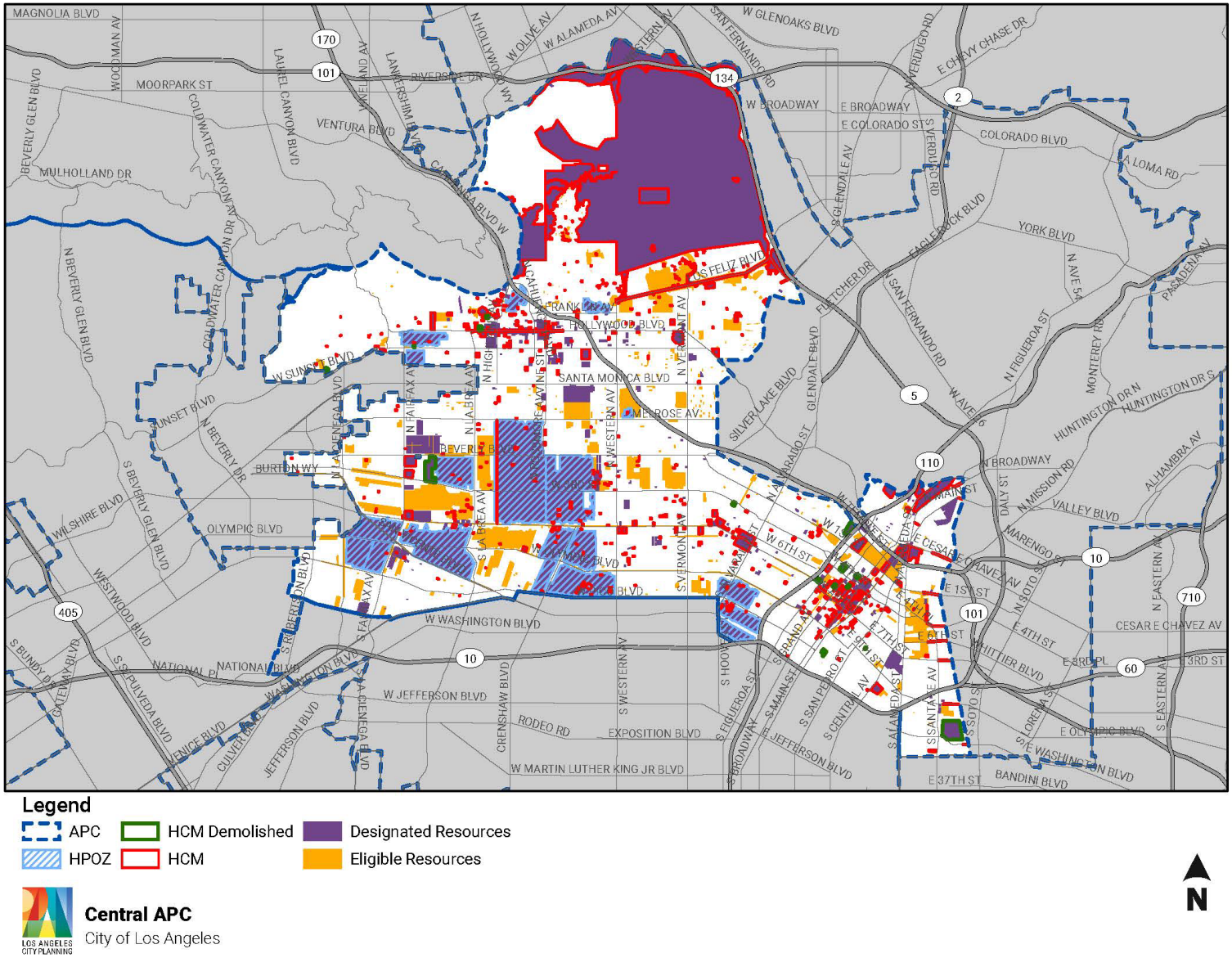


Figure 4.4-7 Central Area Planning Commission



4.4.2 REGULATORY FRAMEWORK

Cultural resources fall within the jurisdiction of several levels of government. The framework for the identification and, in certain instances, protection of cultural resources is established at the federal level, while the identification, documentation, and protection of such resources are often undertaken by state and local governments. As described below, the principal federal, State, and local laws governing and influencing the preservation of cultural resources of national, State, regional, and local significance include:

- The National Historic Preservation Act of 1966, as amended;
- The Secretary of the Interior's Standards for the Treatment of Historic Properties (Secretary's Standards);
- The Native American Graves Protection and Repatriation Act;
- The Archaeological Resources Protection Act;
- The Archaeological Data Preservation Act;
- The California Environmental Quality Act (CEQA);
- The California Register;
- The California Health and Safety Code;
- The California Public Resources Code (PRC);
- The City of Los Angeles General Plan;
- The City of Los Angeles Cultural Heritage Ordinance (Los Angeles Administrative Code, Section 22.171);
- The City of Los Angeles Historic Preservation Overlay Zone Ordinance (Los Angeles Municipal Code [LAMC], Section 12.20.3); and
- The City of Los Angeles Historic Resources Survey (SurveyLA); and
- Redevelopment Project Area Historic Resources Surveys and Specific Plan Area Historic Resources Surveys

Federal

National Historic Preservation Act and National Register of Historic Places

The National Historic Preservation Act of 1966 established the National Register of Historic Places (National Register) as "an authoritative guide to be used by federal, state, and local governments, private groups and citizens to identify the Nation's historic resources and to indicate what properties should be

considered for protection from destruction or impairment".[5] The National Register recognizes a broad range of cultural resources that are significant at the national, state, and local levels and can include districts, buildings, structures, objects, prehistoric archaeological sites, historic-period archaeological sites, traditional cultural properties, and cultural landscapes. Within the National Register, approximately 2,500 (three percent) of the more than 90,000 districts, buildings, structures, objects, and sites are recognized as National Historic Landmarks or National Historic Landmark Districts as possessing exceptional national significance in American history and culture. [6]

Whereas individual historic properties derive their significance from one or more of the criteria discussed in the subsequent section, a historic district derives its importance from being a unified entity, even though it is often composed of a variety of resources. With a historic district, the historic resource is the district itself. The identity of a district results from the interrelationship of its resources, which can be an arrangement of historically or functionally related properties.[7] A district is defined as a geographic area of land containing a significant concentration of buildings, sites, structures, or objects united by historic events, architecture, aesthetic, character, and/or physical development. A district's significance and historic integrity determine its boundaries. Other factors include:

- Visual barriers that mark a change in the historic character of the area or that break the continuity of the district, such as new construction, highways, or development of a different character;
- Visual changes in the character of the area due to different architectural styles, types, or periods, or to a decline in the concentration of contributing resources;
- Boundaries at a specific time in history, such as the original city limits or the legally recorded boundaries of a housing subdivision, estate, or ranch; and
- Clearly differentiated patterns of historical development, such as commercial versus residential or industrial.[8]

Within historic districts, properties are identified as contributing and non-contributing. A contributing building, site, structure, or object adds to the historic associations, historic architectural qualities, or archaeological values for which a district is significant because:

[5] 36 Code of Federal Regulations (CFR) 60. https://www.energy.gov/sites/prod/files/2016/02/f29/CFR-2012-title36-vol1-part60.pdf. Accessed February 8, 2021.
[6] United States Department of the Interior, National Park Service, National Historic Landmarks Frequently Asked Questions. https://www.nps.gov/subjects/nationalhistoriclandmarks/faqs.htm. Accessed Month February 8, 2021.
[7] United States Department of the Interior, National Register Bulletin #15: How to Apply the National Register Criteria for Evaluation, 1997, page 5.
[8] United States Department of the Interior, National Register Bulletin #21: Defining Boundaries for National Register Properties Form, 1997, page 12.

- It was present during the period of significance, relates to the significance of the district, and retains its physical integrity; or
- It independently meets the criterion for listing in the National Register.

A resource that is listed in or eligible for listing in the National Register is considered "historic property" under Section 106 of the National Historic Preservation Act.

Criteria

To be eligible for listing in the National Register, a resource must be at least 50 years of age, unless it is of exceptional importance as defined in Title 36 CFR, Part 60, Section 60.4(g). In addition, a resource must be significant in American history, architecture, archaeology, engineering, or culture. Four criteria for evaluation have been established to determine the significance of a resource:

A. Are associated with events that have made a significant contribution to the broad patterns of our history;
B. Are associated with the lives of persons significant in our past;
C. Embody the distinctive characteristics of a type, period, or method of construction or that represent the work of a master, or that possess high artistic values, or that represent a significant and distinguishable entity whose components may lack individual distinction; or
D. Have yielded, or may be likely to yield, information important in prehistory or history.[9]

Context

To be eligible for listing in the National Register, a property must be significant within a historic context. National Register Bulletin #15 states that the significance of a historic property can be judged only when it is evaluated within its historic context. Historic contexts are "those patterns, themes, or trends in history by which a specific...property or site is understood and its meaning... is made clear."[10] A property must represent an important aspect of the area's history or prehistory and possess the requisite integrity to qualify for the National Register.

Integrity

In addition to meeting one or more of the criteria of significance, a property must have integrity, which is defined as "the ability of a property to convey its significance".[11] The National Register recognizes seven qualities that, in various combinations, define integrity. The seven factors that define integrity are location,

[9] United States Department of the Interior, National Register Bulletin #15: How to Apply the National Register Criteria for Evaluation, 1997, page 8.
[10] United States Department of the Interior, National Register Bulletin #15: How to Apply the National Register Criteria for Evaluation, 1997, pages 7 and 8.
[11] United States Department of the Interior, National Register Bulletin #15: How to Apply the National Register Criteria for Evaluation, 1997, page 44.

design, setting, materials, workmanship, feeling, and association. To retain historic integrity a property must possess several, and usually most, of these seven aspects. Thus, the retention of the specific aspects of integrity is paramount for a property to convey its significance. In general, the National Register has a higher integrity threshold than State or local registers.

In the case of districts, integrity means the physical integrity of the buildings, structures, or features that make up the district as well as the historic, spatial, and visual relationships of the components. Some buildings or features may be more altered over time than others. In order to possess integrity, a district must, on balance, still communicate its historic identity in the form of its character defining features.

Criteria Considerations

Certain types of properties, including religious properties, moved properties, birthplaces or graves, cemeteries, reconstructed properties, commemorative properties, and properties that have achieved significance within the past 50 years are not considered eligible for the National Register unless they meet one of the seven categories of Criteria Considerations A through G, in addition to meeting at least one of the four significance criteria discussed above, and possess integrity as defined above.[12] Criteria Consideration G is intended to prevent the listing of properties for which insufficient time may have passed to allow the proper evaluation of their historical importance.[13] The full list of Criteria Considerations is provided below:

A. A religious property deriving primary significance from architectural or artistic distinction or historical importance; or
B. A building or structure removed from its original location but which is significant primarily for architectural value, or which is the surviving structure most importantly associated with a historic person or event; or
C. A birthplace or grave of a historical figure of outstanding importance, if there is no other appropriate site or building directly associated with his or her productive life; or
D. A cemetery which derives its primary significance from graves of persons of transcendent importance, from age, from distinctive design features, or from association with historic events; or
E. A reconstructed building when accurately executed in a suitable environment and presented in a dignified manner as part of a restoration master plan, and when no other building or structure with the same association has survived; or

[12] United States Department of the Interior, National Register Bulletin #15: How to Apply the National Register Criteria for Evaluation, 1997, page 25.
[13] United States Department of the Interior, National Register Bulletin #15: How to Apply the National Register Criteria for Evaluation, 1997, page 41.

F. A property primarily commemorative in intent if design, age, tradition, or symbolic value has invested it with its own historical significance; or

G. A property achieving significance within the past 50 years, if it is of exceptional importance.

Secretary of the Interior's Standards

The National Park Service issued the Secretary of the Interior's Standards with accompanying guidelines for four types of treatments for historic resources: Preservation, Rehabilitation, Restoration, and Reconstruction. The most applicable guidelines should be used when evaluating a project for compliance with the Secretary of the Interior's Standards. Although none of the four treatments, as a whole, apply specifically to new construction in the vicinity of historic resources, Standards #9 and #10 of the Secretary of the Interior's Standards for Rehabilitation provides relevant guidance for such projects. The Standards for Rehabilitation are as follows:

1. A property will be used as it was historically or be given a new use that requires minimal change to its distinctive materials, features, spaces and spatial relationships.
2. The historic character of a property will be retained and preserved. The removal of distinctive materials or alteration of features, spaces, and spatial relationships that characterize a property will be avoided.
3. Each property will be recognized as a physical record of its time, place and use. Changes that create a false sense of historical development, such as adding conjectural features or elements from other historic properties, will not be undertaken.
4. Changes to a property that have acquired significance in their own right will be retained and preserved.
5. Distinctive materials, features, finishes and construction techniques or examples of craftsmanship that characterize a property will be preserved.
6. Deteriorated historic features will be repaired rather than replaced. Where the severity of deterioration requires replacement of a distinctive feature, the new feature shall match the old in design, color, texture, and where possible, materials. Replacement of missing features will be substantiated by documentary and physical evidence.
7. Chemical or physical treatments, if appropriate, will be undertaken using the gentlest means possible. Treatments that cause damage to historic materials will not be used.
8. Archeological resources will be protected and preserved in place. If such resources must be disturbed, mitigation measures will be undertaken.

9. New additions, exterior alterations, or related new construction will not destroy historic materials, features, and spatial relationships that characterize the property. The new work shall be differentiated from the old and will be compatible with the historic materials, features, size, scale and proportion, and massing to protect the integrity of the property and its environment.
10. New additions and adjacent or related new construction will be undertaken in such a manner that if removed in the future, the essential form and integrity of the historic property and its environment would be unimpaired.[14]

It is important to note that the Secretary of the Interior's Standards are not intended to be prescriptive but, instead, provide general guidance. They are intended to be flexible and adaptable to specific project conditions to balance continuity and change, while retaining materials and features to the maximum extent feasible. Their interpretation requires exercising professional judgment and balancing the various opportunities and constraints of any given project. Not every Standard necessarily applies to every aspect of a project, and it is not necessary for a project to comply with every Standard to achieve compliance.

Native American Graves Protection and Repatriation Act

The Native American Graves Protection and Repatriation Act (NAGPRA) requires federal agencies to return Native American cultural items to the appropriate Federally recognized Indian tribes or Native Hawaiian groups with which they are associated.[15]

Archaeological Resources Protection Act

The Archaeological Resources Protection Act (ARPA) of 1979 governs the excavation, removal, and disposition of archaeological sites and collections on federal and Native American lands. This act was most recently amended in 1988. ARPA defines archaeological resources as any material remains of human life or activities that are at least 100 years of age, and which are of archeological interest. ARPA makes it illegal for anyone to excavate, remove, sell, purchase, exchange, or transport an archaeological resource from federal or Native American lands without a proper permit.[16]

[14] United States Department of the Interior, National Park Service, the Secretary of the Interior's Standards for the Treatment of Historic Properties with Guidelines for Preserving, Rehabilitating, Restoring, and Reconstructing Historic Buildings, 2017.
[15] United States Department of the Interior, National Park Service, Native American Graves Protection And Repatriation Act. https://www.nps.gov/archeology/tools/laws/nagpra.htm. Accessed February 12, 2021.
[16] United States Department of the Interior, National Park Service, Technical Brief # 20: Archeological Damage Assessment: Legal Basis and Methods, 2007.

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.

State

California Environmental Quality Act

CEQA is the principal statute governing environmental review of projects occurring in the state and is codified in PRC Section 21000 et seq. CEQA requires lead agencies to determine if a proposed project would have a significant effect on the environment, including significant effects on historical or unique archaeological resources. Under CEQA Section 21084.1, a project that may cause a substantial adverse change in the significance of a historical resource is a project that may have a significant effect on the environment.

CEQA Guidelines Section 15064.5 recognizes that historical resources include: (1) resources listed in, or determined to be eligible by the State Historical Resources Commission, for listing in the California Register; (2) resources included in a local register of historical resources, as defined in PRC Section 5020.1(k) or identified as significant in a historical resource survey meeting the requirements of PRC Section 5024.1(g); and (3) any objects, buildings, structures, sites, areas, places, records, or manuscripts which a lead agency determines to be historically significant or significant in the architectural, engineering, scientific, economic, agricultural, educational, social, political, military, or cultural annals of California by the lead agency, provided the lead agency's determination is supported by substantial evidence in light of the whole record.

If a lead agency determines that an archaeological site is a historical resource, the provisions of PRC Section 21084.1 and CEQA Guidelines Section 15064.5 apply. If an archaeological site does not meet the criteria for a historical resource contained in the CEQA Guidelines, then the site may be treated in accordance with the provisions of PRC Section 21083, if it meets the criteria of a unique archaeological resource. As defined in PRC Section 21083.2, a unique archaeological resource is an archaeological artifact, object, or site, about which it can be clearly demonstrated that without merely adding to the current body of knowledge, there is a high probability that it meets any of the following criteria:

- Contains information needed to answer important scientific research questions and there is a demonstrable public interest in that information;
- Has a special and particular quality such as being the oldest of its type or the best available example of its type; or

- Is directly associated with a scientifically recognized important prehistoric or historic event or person.

If an archaeological site meets the criteria for a unique archaeological resource as defined in PRC Section 21083.2, then the site is to be treated in accordance with the provisions of PRC Section 21083.2, which state that if the lead agency determines that a project would have a significant effect on unique archaeological resources, the lead agency may require reasonable efforts be made to permit any or all of these resources to be preserved in place.[17] If preservation in place is not feasible, mitigation measures shall be required. The CEQA Guidelines note that if an archaeological resource is neither a unique archaeological nor a historical resource, the effects of the project on those resources shall not be considered a significant effect on the environment.[18]

A significant effect under CEQA would occur if a project results in a substantial adverse change in the significance of a historical resource as defined in CEQA Guidelines Section 15064.5(a). Substantial adverse change is defined as "physical demolition, destruction, relocation, or alteration of the resource or its immediate surroundings such that the significance of a historical resource would be materially impaired".[19] According to CEQA Guidelines Section 15064.5(b)(2), the significance of a historical resource is materially impaired when a project demolishes or materially alters in an adverse manner those physical characteristics that:

A. Convey its historical significance and that justify its inclusion in, or eligibility for, inclusion in the California Register; or
B. Account for its inclusion in a local register of historical resources pursuant to PRC Section 5020.1(k) or its identification in a historical resources survey meeting the requirements of PRC Section 5024.1(g) Code, unless the public agency reviewing the effects of the project establishes by a preponderance of evidence that the resource is not historically or culturally significant; or
C. Convey its historical significance and that justify its eligibility for inclusion in the California Register as determined by a Lead Agency for purposes of CEQA.

In general, a project that complies with the Secretary of the Interior's Standards for the Treatment of Historic Properties with Guidelines for Preserving, Rehabilitating, Restoring, and Reconstructing Historic Buildings is considered to have impacts that are less than significant.[20]

[17] California Public Resources Code Section 21083.1(a), http://leginfo.legislature.ca.gov/faces/codes_displaySection.xhtml?lawCode=PRC&sectionNum=21083.2. Accessed February 12, 2021.
[18] State CEQA Statute and Guidelines, Section 15064.5(c)(4).
[19] State CEQA Guidelines, Section 15064.5(b)(1).
[20] State CEQA Guidelines, 15064.5(b)(3).

California Register of Historical Resources

The California Register is "an authoritative listing and guide to be used by State and local agencies, private groups, and citizens in identifying the existing historical resources of the State and to indicate which resources deserve to be protected, to the extent prudent and feasible, from substantial adverse change."[21] The California Register was enacted in 1992, and its regulations became official on January 1, 1998. The California Register is administered by the California Office of Historic Preservation (OHP). The criteria for eligibility for the California Register are based upon National Register criteria.[22] Certain resources are determined to be automatically included in the California Register, including California properties formally determined eligible for, or listed in, the National Register. To be eligible for the California Register, a prehistoric or historic-period property must be significant at the local, State, and/or federal level under one or more of the following four criteria:

1. Is associated with events that have made a significant contribution to the broad patterns of California's history and cultural heritage;
2. Is associated with the lives of persons important in our past;
3. Embodies the distinctive characteristics of a type, period, region, or method of construction, or represents the work of an important creative individual, or possesses high artistic values; or
4. Has yielded, or may be likely to yield, information important in prehistory or history.

A resource eligible for the California Register must meet one of the criteria of significance described above, and retain enough of its historic character or appearance (integrity) to be recognizable as a historical resource and to convey the reason for its significance. It is possible that a historic resource may not retain sufficient integrity to meet the criteria for listing in the National Register, but it may still be eligible for listing in the California Register.

Additionally, the California Register consists of resources that are listed automatically and those that must be nominated through an application and public hearing process. The California Register automatically includes the following:

- California properties listed on the National Register and those formally determined eligible for the National Register;
- California Registered Historical Landmarks from No. 770 onward; and,

[21] California Public Resources Code, Section 5024.1[a].
http://leginfo.legislature.ca.gov/faces/codes_displaySection.xhtml?lawCode=PRC&sectionNum=5024.1. Accessed February 12, 2021.
[22] California Public Resources Code, Section 5024.1[b]
http://leginfo.legislature.ca.gov/faces/codes_displaySection.xhtml?lawCode=PRC&sectionNum=5024.1. Accessed February 12, 2021.

- Those California Points of Historical Interest that have been evaluated by the California OHP and have been recommended to the State Historical Resources Commission for inclusion on the California Register.

Other resources that may be nominated to the California Register include:

- Historical resources with a significance rating of Category 3 through 5 (those properties identified as eligible for listing in the National Register, the California Register, and/or a local jurisdiction register);
- Individual historical resources;
- Historic districts; and,
- Historical resources designated or listed as local landmarks, or designated under any local ordinance, such as an historic preservation overlay zone.

California Health and Safety Code

California Health and Safety Code Sections 7050.5, 7051, and 7054 address the illegality of interference with human burial remains (except as allowed under applicable PRC Sections), and the disposition of Native American burials in archaeological sites. These regulations protect such remains from disturbance, vandalism, or inadvertent destruction, and establish procedures to be implemented if Native American skeletal remains are discovered during construction of a project, including treatment of the remains prior to, during, and after evaluation, and reburial procedures.

California Public Resources Code

PRC Section 5097.98, as amended by Assembly Bill 2641, provides procedures in the event human remains of Native American origin are discovered during project implementation. PRC Section 5097.98 requires that no further disturbances occur in the immediate vicinity of the discovery, that the discovery is adequately protected according to generally accepted cultural and archaeological standards, and that further activities take into account the possibility of multiple burials. PRC Section 5097.98 further requires the Native American Heritage Commission (NAHC), upon notification by a County Coroner, designate and notify a Most Likely Descendant (MLD) regarding the discovery of Native American human remains. Once the MLD has been granted access to the site by the landowner and inspected the discovery, the MLD then has 48 hours to provide recommendations to the landowner for the treatment of the human remains and any associated grave goods. In the event that no descendant is identified, or the descendant fails to make a recommendation for disposition, or if the land owner rejects the recommendation of the descendant, the landowner may, with appropriate dignity, reinter the remains and burial items on the property in a location that will not be subject to further disturbance.

Local

City of Los Angeles General Plan

Conservation Element

The City of Los Angeles General Plan includes a Conservation Element. Section 3 of the Conservation Element, adopted in September 2001, includes policies for the protection of archaeological resources. As stated therein, it is the City's policy that archaeological resources be protected for research and/or educational purposes. Section 5 of the Conservation Element recognizes the City's responsibility for identifying and protecting its cultural and historical heritage. The Conservation Element establishes the policy to continue to protect historic and cultural sites and/or resources potentially affected by proposed land development, demolition, or property modification activities, with the related objective to protect important cultural and historical sites and resources for historical, cultural, research, and community educational purposes.[23]

In addition to the National Register and the California Register, two additional types of historic designations may apply at a local level:

1. Historic-Cultural Monument (HCM)
2. Classification by the City Council as a Historic Preservation Overlay Zone (HPOZ)

City of Los Angeles Cultural Heritage Ordinance

The Los Angeles City Council adopted the Cultural Heritage Ordinance in 1962 and most recently amended it in 2018 (Sections 22.171 et seq. of the Administrative Code). The Ordinance created a Cultural Heritage Commission (CHC) and criteria for designating an HCM. The CHC is comprised of five citizens, appointed by the Mayor, who have exhibited knowledge of Los Angeles history, culture, and architecture. The City of Los Angeles Cultural Heritage Ordinance states that a HCM designation is reserved for those resources that have a special aesthetic, architectural, or engineering interest or value of a historic nature and meet one of the following criteria. A historical or cultural monument is any site, building, or structure of particular historical or cultural significance to the City of Los Angeles. The four criteria for HCM designation are stated below:

- The proposed HCM reflects the broad cultural, economic, or social history of the nation, state or community is reflected or exemplified; or
- The proposed HCM is identified with historic personages or with important events in the main currents of national, state or local history; or

[23] City of Los Angeles, Conservation Element of the General Plan, pages II-3 to II-5. https://planning.lacity.org/odocument/28af7e21-ffdd-4f26-84e6- dfa967b2a1ee/Conservation_Element.pdf . Accessed February 12, 2021.

- The proposed HCM embodies the characteristics of an architectural type specimen inherently valuable for a study of a period, style or method of construction;
- The proposed HCM is the notable work of a master builder, designer, or architect whose individual genius influenced his or her age.[24]

A proposed resource may be eligible for designation if it meets at least one of the criteria above. When determining historic significance and evaluating a resource against the Cultural Heritage Ordinance criteria above, the CHC and OHR staff often ask the following questions:

- Is the site or structure an outstanding example of past architectural styles or craftsmanship?
- Was the site or structure created by a "master" architect, builder, or designer?
- Did the architect, engineer, or owner have historical associations that either influenced architecture in the City or had a role in the development or history of Los Angeles?
- Has the building retained "integrity"? Does it still convey its historic significance through the retention of its original design and materials?
- Is the site or structure associated with important historic events or historic personages that shaped the growth, development, or evolution of Los Angeles or its communities?
- Is the site or structure associated with important movements or trends that shaped the social and cultural history of Los Angeles or its communities?

Unlike the National and California Registers, the Cultural Heritage Ordinance makes no mention of concepts such as physical integrity or period of significance. However, in practice, the seven aspects of integrity from the National Register and California Register are applied similarly and the threshold of integrity for individual eligibility is similar. It is common for the CHC to consider alterations to nominated properties in making its recommendations on designations. Moreover, properties do not have to reach a minimum age requirement, such as 50 years, to be designated as HCMs. In addition, the LAMC Section 91.106.4.5 states that the Los Angeles Department of Building and Safety "shall not issue a permit to demolish, alter or remove a building or structure of historical, archaeological or architectural consequence if such building or structure has been officially designated, or has been determined by state or federal action to be eligible for designation, on the National Register of Historic Places, or has been included on the City of Los Angeles list of HCMs, without the department having first determined whether the demolition, alteration or removal may result in the loss of or serious damage to a significant historical or cultural asset. If the department determines that such loss or damage may occur, the applicant shall file an application and pay all fees for the CEQA Initial Study and Check List, as specified in Section 19.05 of the LAMC. If the

[24] *City of Los Angeles, Los Angeles Administrative Code, Section 22.171.7.*

Initial Study and Check List identifies the historical or cultural asset as significant, the permit shall not be issued without the department first finding that specific economic, social or other considerations make infeasible the preservation of the building or structure."[25]

City of Los Angeles Historic Preservation Overlay Zone Ordinance

The Los Angeles City Council adopted the ordinance enabling the creation of HPOZs in 1979; most recently, this ordinance was amended in 2017. Angelino Heights became Los Angeles' first HPOZ in 1983. The City currently contains 35 HPOZs. An HPOZ is a significant concentration, linkage, or continuity of sites, buildings, structures, or objects united historically or aesthetically by plan or physical development.[26] Each HPOZ is established with a Historic Resources Survey, a historic context statement, and a preservation plan. The Historic Resources Survey identifies all Contributing and Non-Contributing features and lots. The context statement identifies the historic context, themes, and subthemes of the HPOZ as well as the period of significance. The preservation plan contains guidelines that inform appropriate methods of maintenance, rehabilitation, restoration, and new construction. Contributing Elements are defined as any building, structure, Landscaping, or Natural Feature identified in the Historic Resources Survey as contributing to the Historic significance of the HPOZ, including a building or structure which has been altered, where the nature and extent of the Alterations are determined reversible by the Historic Resources Survey.[27] For CEQA purposes, Contributing Elements are treated as contributing features to a historic district, which is the historical resource. Non-Contributing Elements are any building, structure, Landscaping, Natural Feature identified in the Historic Resources Survey as being built outside of the identified period of significance or not containing a sufficient level of integrity. For CEQA purposes, Non-Contributing Elements are not treated as contributing features to a historical resource.

City of Los Angeles Historic Resources Survey

SurveyLA is a Citywide survey that identifies and documents potentially significant historical resources representing important themes in the City's history. The survey and resource evaluations were completed by consultant teams under contract to the City and under the supervision of the City's OHR. The program was managed by OHR, which maintains a website for SurveyLA. The field surveys cumulatively covered broad periods of significance, from approximately 1850 to 1980 depending on the location, and included individual resources such as buildings, structures, objects, natural features and cultural landscapes as well as areas and districts (archaeological resources are planned to be included in future survey phases). The survey identified a wide variety of potentially significant resources that reflect important themes in the City's growth and development in various areas including architecture, city planning, social history, ethnic

[25] City of Los Angeles, Los Angeles Municipal Code, Section 91.106.4.5.1.
[26] City of Los Angeles, Los Angeles Municipal Code, Section 12.20.3.
[27] City of Los Angeles, Los Angeles Municipal Code, Section 12.20.3.

heritage, politics, industry, transportation, commerce, entertainment, and others. Field surveys, conducted from 2010-2017, were completed in three phases by Community Plan Area. However, SurveyLA did not survey areas already designated as HPOZs or areas already surveyed by Community Redevelopment Agencies. All tools, methods, and criteria developed for SurveyLA were created to meet state and federal professional standards for survey work.

Los Angeles' Citywide Historic Context Statement (HCS) was designed for use by SurveyLA field surveyors and by all agencies, organizations, and professionals completing historical resources surveys in the City of Los Angeles. The context statement was organized using the Multiple Property Documentation (MPD) format developed by the National Park Service for use in nominating properties to the National Register. This format provided a consistent framework for evaluating historical resources. It was adapted for local use to evaluate the eligibility of properties for city, state, and federal designation programs. The HCS used Eligibility Standards to identify the character defining, associative features and integrity aspects a property must retain to be a significant example of a type within a defined theme. Eligibility Standards also indicated the general geographic location, area of significance, applicable criteria, and period of significance associated with that type. These Eligibility Standards are guidelines based on knowledge of known significant examples of property types; properties do not need to meet all of the Eligibility Standards in order to be eligible. Moreover, there are many variables to consider in assessing integrity depending on why a resource is significant under the National Register, California Register or City of Los Angeles HCM eligibility criteria. SurveyLA findings are subject to change over time as properties age, additional information is uncovered, and more detailed analyses are completed. Resources identified through SurveyLA are not designated resources. Designation by the City of Los Angeles and nominations to the California or National Registers are separate processes that include property owner notification and public hearings.

Redevelopment Area Historic Resources Surveys and Specific Plan Area Historic Resources Surveys

The CRA/LA was established in 1948 to revitalize economically underserved areas within the City of Los Angeles by increasing the supply of low income housing, providing infrastructure for commercial and industrial development, and creating employment opportunities.[28] To carry out these goals, CRA/LA adopts comprehensive plans for each Redevelopment Area. Some areas also include a historical resources survey that documents all of the historical resources--individual and districts--within the Redevelopment Area. These CRA/LA surveys were done independent of the City's SurveyLA effort, though some of the more recent surveys may have used the same methodology and technology that was used in SurveyLA. SurveyLA did not survey areas already surveyed by CRA/LA. Currently, there are 32 Redevelopment

[28] Community Redevelopment Agency of the City of Los Angeles. Who We Are. http://www.crala.org/internet-site/About/who_we_are.cfm. Accessed February 12, 2021.

Areas throughout Los Angeles. On September 30, 2019, the Los Angeles City Council voted to adopt Ordinance No. 186325 to effectuate the transfer of land use related plans and functions of the CRA/LA to the City of Los Angeles. As a result, the Department of City Planning has jurisdiction over review of properties located within Redevelopment Areas as of November 11, 2019.

The City of Los Angeles also contains unique Specific Plan areas. Like Redevelopment Project Areas, some Specific Plan areas may include a historical resources survey that documents all of the historical resources within the Specific Plan area.

4.4.3 ENVIRONMENTAL IMPACTS

Thresholds of Significance

The following thresholds of significance are based on Appendix G of the CEQA Guidelines. The Proposed Project would have a significant impact to cultural resources if it would:

- **Threshold 4.4-1:** Cause a substantial adverse change in the significance of a historical resource as defined in § 15064.5
- **Threshold 4.4-2:** Cause a substantial adverse change in the significance of an archaeological resource pursuant to § 15064.5

Methodology

The analysis of cultural resource impacts was based on review of applicable historical resources registers and databases, survey reports, and plans and policies, as described in the *Environmental Setting*. Additional methods included desktop analyses (including historical review of housing approvals throughout the City), consideration of historical and archaeological resources identified in Figure 4.4-1 through Figure 4.4-7 and all figures in Appendix F and definition of existing conditions that characterize the prehistory and history of Los Angeles.[29] Impacts to cultural resources from implementation of the Housing Element Update could include the demolition, alteration, or relocation of built environment historical resources or the disturbance of prehistoric or historic archaeological remains.

[29] Based on the Project Area involving the entire City of Los Angeles, field surveys and a CHRIS record search were found infeasible and not to substantively add to the analysis.

Regulatory Compliance Measure

As discussed in the regulatory setting, there are extensive regulatory schemes that address cultural resources. Among those, future housing development accommodated under the Housing Element Update would be required to comply with the following RCM, as applicable:

- **RCM-CR-1 (Permits for Historical and Cultural Buildings):** The housing development project is required to comply with all applicable standards of LAMC Section 91.106.4.5, which provides procedures for the demolition, alteration, or removal of buildings or structures of historical, archaeological, or architectural consequence, including environmental review and permitting requirements for structures designated by local action or identified as historical by State or federal action.

Project Impacts and Mitigation Measures

Threshold 4.4-1	Would the project cause a substantial adverse change in the significance of a historical resource as defined in § 15064.5?

Impact 4.4-1 Although the existing regulations provide certain protections for significant historical resources, individual developments facilitated by the Housing Element Update could potentially cause a substantial adverse change in or disturbance of known and unknown historical resources as defined in CEQA Guidelines Section 15064.5. Mitigation Measures 4.4-1(a) through 4.4-1(j) would reduce potentially significant impacts to historical resources to the maximum extent feasible. However, impacts to historical resources would be ***significant and unavoidable***.

For purposes of the analysis of impacts to historical resources, historical resources include (a) all resources on the California Register (which include those on the National Register); (b) all HCMs, (c) all HPOZs; and (d) all resources identified as potentially eligible for listing, individually or as a contributor, in a survey prepared for or accepted by the City. For purposes of conducting a conservative analysis and identifying all potential significant impacts to historical resources in this EIR, the City has determined to treat all resources in SurveyLA,[30] or a survey prepared by the CRA/LA, the former Redevelopment Agency that are

[30] Although not all City surveys meet the criteria in PRC Section 5024.1(g) to create a presumption under PRC 21084.1, the City for purposes of this EIR and a desire to perform a conservative analysis to identify all potential significant impacts to historical resources from the Project, is exercising its discretion under PRC 21084.1, to treat all resources identified as potentially eligible for listing individually or as a contributor, in SurveyLA, and other surveys accepted by the City or the former CRA, as a historical resource.

identified as potentially eligible for designation to a local or state register, individually or as a contributor, as a historical resource.

Generally, historical resources may include buildings, structures and objects over 45 years of age, although CEQA and local regulations do not specify an age threshold for historical resources. However, guidance from the State of California OHP recommends that "sufficient time"—typically 50 years—"must have passed to obtain a scholarly perspective" necessary to evaluate the significance of the historical events with which a property is associated.[31] A threshold of 45 years is recommended because it is recognized that there is often "a five year lag between resource identification and the date that planning decisions are made."[32]

Build out of the RHNA under the Housing Element Update includes the construction of up to 420,327 residences throughout the City. Depending on the nature, size, and location of individual residential developments, such developments could potentially impact historical resources.

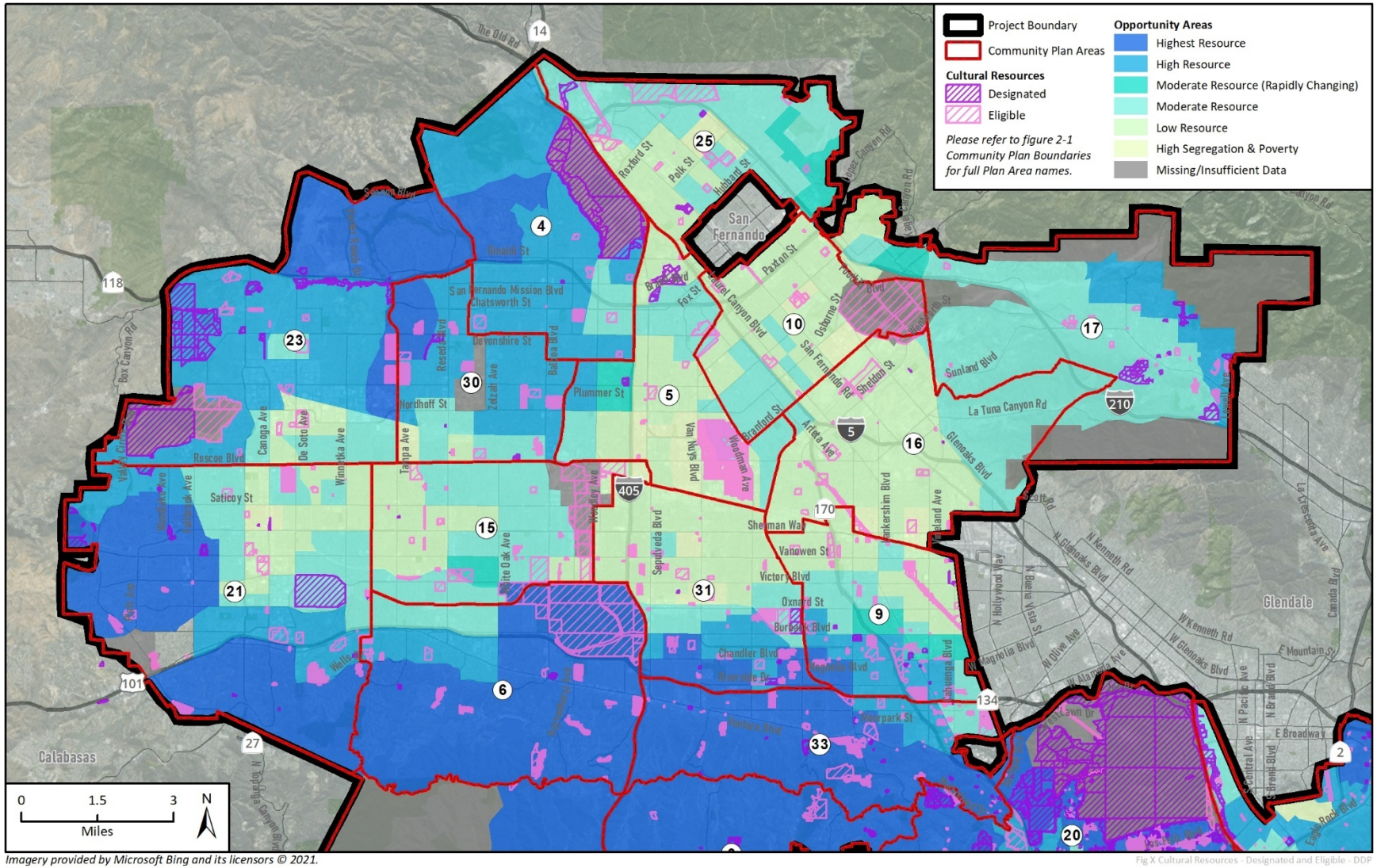
Based on CEQA Guidelines Section 15064.5, activities under the Housing Element Update would have a significant impact on historical resources if they would cause a substantial adverse change in the significance of a historical resource. Section 15064.5 explains that, "[s]ubstantial adverse change in the significance of an historical resource means physical demolition, destruction, relocation, or alteration of the resource or its immediate surroundings such that the significance of an historical resource would be materially impaired." As described in the *Environmental Setting*, above, numerous historical resources have been identified throughout Los Angeles, including both designated resources and those found potentially eligible in SurveyLA or other surveys. Such resources include individual buildings, specific neighborhoods, landscapes, and structures. Examples include the Bradbury Building, El Greco Apartments, Hollywood Sign, Griffith Park, Angel's Flight, and the Lincoln Heights HPOZ. As indicated on Figure 4.4-1 through Figure 4.4-7, Figure 4.4-8a through Figure 4.4-8c, and the figures in Appendix F, such resources are located throughout the City, in every APC and CPA.

The Housing Element Update does not specifically call for the demolition, destruction, removal, or alteration of any historical resource. Nevertheless, although the City's cultural resource regulations and policies assist in protecting historical resources, it is possible that demolition of and/or significant alteration

[31] State of California. Department of Parks and Recreation. Office of Historic Preservation, "California Office of Historic Preservation Technical Assistance Series #6, California Register and National Register: A Comparison (for purposes of determining eligibility for the California Register)." https://ohp.parks.ca.gov/pages/1069/files/technical%20assistance%20bulletin%206%202011%20update.pdf,. Accessed December 14, 2020.

[32] State of California. Department of Parks and Recreation. Office of Historic Preservation. "Instructions for Recording Historical Resources," March 1995. https://scic.sdsu.edu/_resources/docs/manual95.pdf. Accessed December 14, 2020.

Figure 4.4-8a Historical Resources and Opportunity Areas—North Los Angeles



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Additional data provided by City of Los Angeles, 2021.

Fig X Cultural Resources - Designated and Eligible - DDP

Figure 4.4-8b Historical Resources and Opportunity Areas—Central Los Angeles

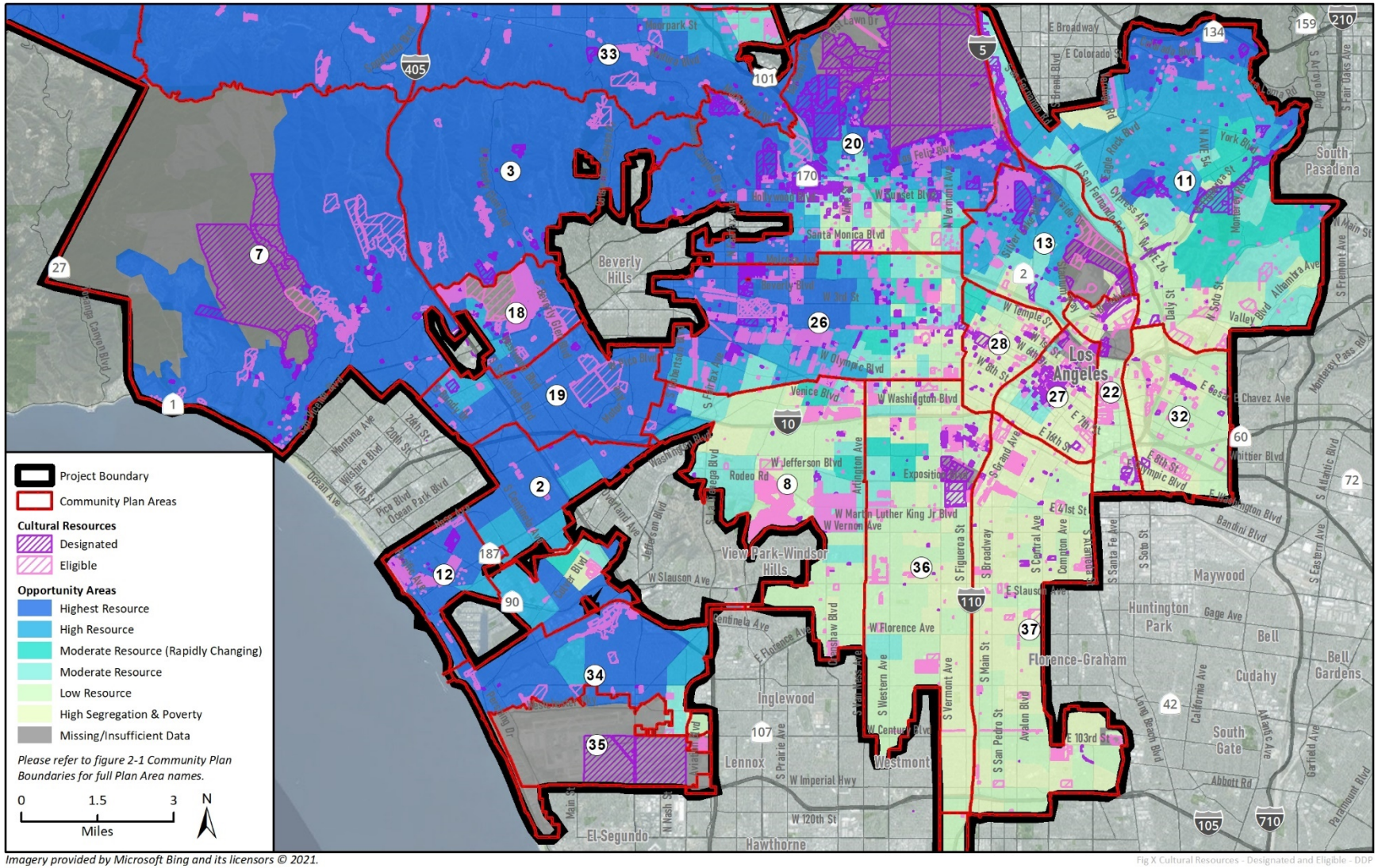
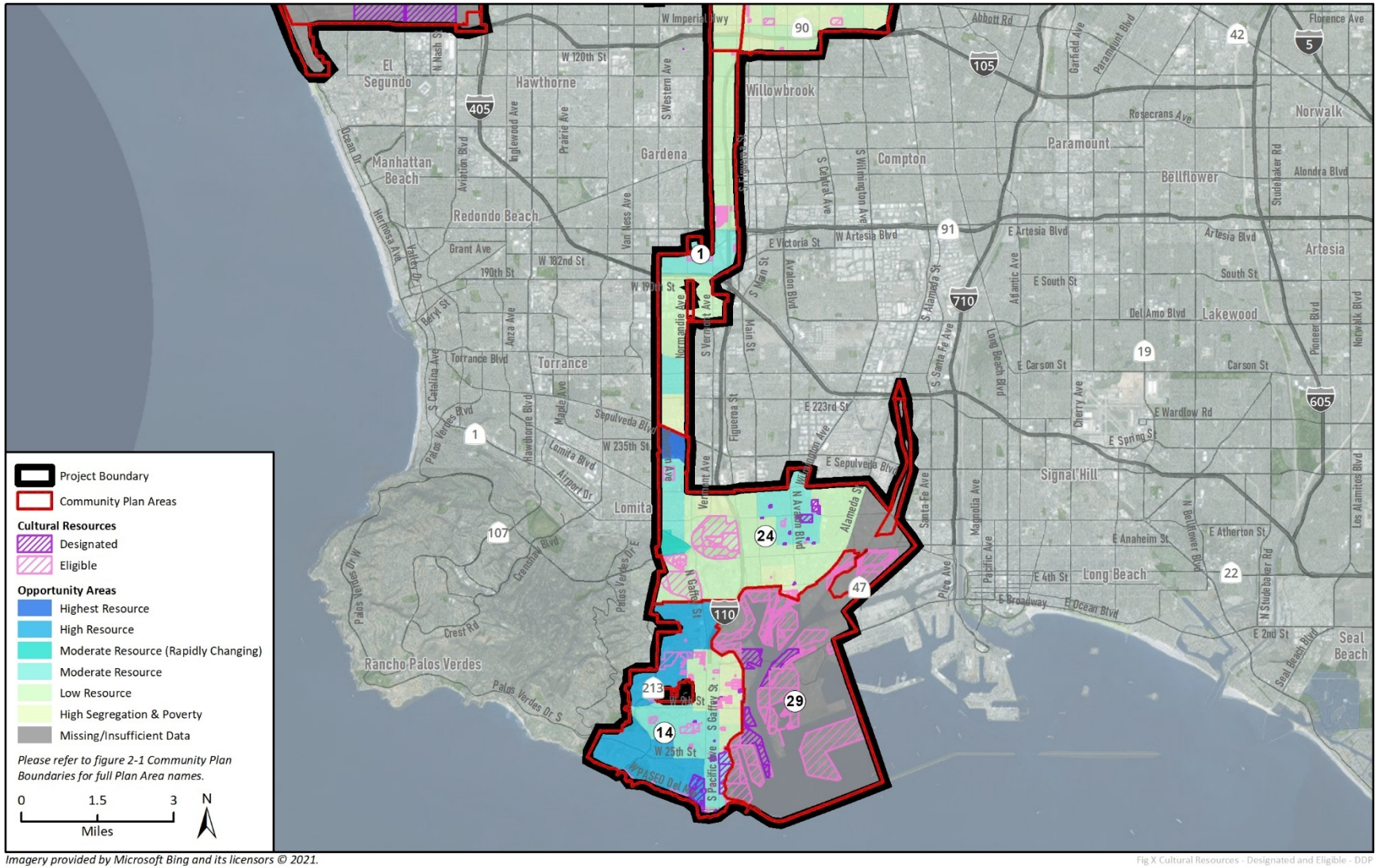


Figure 4.4-8c Historical Resources and Opportunity Areas—South Los Angeles



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Additional data provided by City of Los Angeles, 2021.

Fig X Cultural Resources - Designated and Eligible - DDP

to some historical resources, or construction of incompatible development could occur as a result of the build out of the RHNA, which would accommodate up to 420,327 new housing units citywide through 2029. Historical resources are located throughout the City and there are comparatively high concentrations in CPAs including Northeast Los Angeles, Silverlake - Echo Park - Elysian Valley, Boyle Heights, Central City, Central City North, South Los Angeles, Venice, West Adams - Baldwin Hills - Leimert, Westlake, Westwood, Hollywood, and Wilshire. The Rezoning Program includes a potential focus on sites located in High Resource and Very High Resource Areas, as shown in Figure 3.5 in Section 3, *Project Description.* As depicted in Figure 3.5, these areas are spread across the City and overlap with CPAs known to have high concentrations of historical resources, such as Venice, Westwood, Hollywood, Northeast Los Angeles, Silverlake - Echo Park - Elysian Valley, and Wilshire. A brief description of areas of overlap within these CPAs follows.

Much of the Venice CPA is designated as a High Resource or Very High Resource area, and while the largest concentrations of historical resources as found in the central portion of the CPA, historical resources are found throughout the CPA. In the Westwood CPA, concentrations of historical resources overlap the High or Very High Resource areas located throughout much of the CPA outside the University of California, Los Angeles campus. In the Hollywood CPA, substantial concentrations of historical resources coincide with High Resource and Very High Resource areas along and near the Los Feliz Boulevard and Hollywood Boulevard corridors, though there are smaller concentrations in High Resource and Very High Resource areas in other parts of the CPA, especially on the west side. The northern section of Northeast Los Angeles - Silverlake - Echo Park - Elysian Valley CPA is generally designated as High Resource or Very High Resource areas; within these areas, substantial concentrations of historical resources occur roughly between Highway 134 to the north and York Boulevard to the south. Overlapping areas of historical resources and High or Very High Resource areas occur through much of the Wilshire CPA, but occur in large concentrations in the central and west portions of the CPA.

Open space parcels containing historical resources, such as Griffith Park or Barnsdall Park, would not be directly affected by projects under the Housing Element Update because residential uses are not permitted on open space parcels.

The types of housing units accommodated under the Housing Element Update would generally fall into five categories of development projects, each of which is addressed below with respect to its potential to impact cultural resources. Table 4-2 in Section 4, *Environmental Analysis*, provides an overview of 54 previous housing projects and their associated environmental impacts. As shown therein, eight projects were found to have significant and unavoidable impacts relating to cultural resources. Twenty-one projects were found to have less than significant impacts after incorporation of mitigation measures, and all other projects were found to have less than significant impacts to cultural resources.

The types of housing units accommodated under the Housing Element Update would generally fall into five categories of development projects - multi-family residential development; single-family residential development; accessory dwelling units (ADU); mixed use development; and conversion and/or rehabilitation of existing nonresidential, residential and mixed-use structures to be used for housing. Although the most likely potential impacts vary somewhat by development type, potential impacts would generally include: (1) the demolition or alteration of a historical resource; (2) demolition and new construction within the boundaries of an HPOZ or other historic district; and (3) alteration of a resource's setting by introducing new visual elements. Further discussion of the potential impacts of these project types follows.

- **Multi-family residential:** Multi-family residential projects may range in size from small apartment buildings with two to ten units to larger apartment buildings and high-rise structures with more than 200 units. Multi-family developments of any size could potentially cause direct impacts, which may include the demolition of a historical resource located on the development site or the introduction of architecturally incompatible building(s) into a historic district. Large multi-family development projects may have the potential to result in more substantial impacts due to their greater footprint and scale, although some types of multi-family developments, such as permanent supportive housing and single-resident occupancy development, may result in different impacts, because parking requirements could differ (enabling the project to provide surface parking, rather than subterranean, for example). As such, multi-family developments may have a greater potential to encompass and thus, directly affect, a property containing a resource. Their larger scale also makes them more likely to cause significant indirect impacts, such as undermining the historic setting of a resource (including HPOZs/historic districts) by introducing incompatible elements. As listed in Table 4-2 of Section 4, *Environmental Analysis*, of this EIR, the 1639-1641 Abbott Kinney project was a recent example project of a small multi-family residential project that involved remodeling of an existing building and construction of four new dwelling units and retail space on a property containing a single-family residence recommended eligible for the National Register, California Register, and HCM designation. The MND found the following:

  > *The subject site is developed with a mixed-use structure, located at the front portion of the lot and a one-story single-family dwelling, located at the rear portion of the lot. The single-family dwelling was identified in SurveyLA, a comprehensive program that identifies and categorizes significant historic resources throughout the City, as a potential historical resource. The structure was identified with status code of 3S (appears eligible for national Register as an individual property through SurveyLA or other survey evaluation), 3CS (appears eligible for California Register as an individual property through SurveyLA or other survey evaluation), and 5S3 (appears to be individually eligible for local listing or designation through SurveyLA or other survey evaluation). According to SurveyLA the rear building on the Project site is a: "Rare*

remaining example of a streetcar ticket building in Venice. This was a ticket building for the Venice Short Line, a Pacific Electric streetcar line that ran along Electric Avenue. The building's Asian/Oriental motif is similar to the main train station, called the "Tokio" stop, which was located next to City Hall on Venice Boulevard." A Historical Resource Assessment was prepared by SWCA Environmental Consultants, dated December 11, 2019, with a supplemental letter dated January 30, 2020 (Appendix A). The report determined that the rear building is individually eligible for listing in the National Register of Historic Places (NRHP), the California Register of Historic Resources (CRHR), and for designation as a Los Angeles Historic-Cultural Monument (HCM). The building conveys a strong visual sense of the overall historic environment of Abbot Kinney Boulevard during the period of pre-consolidation Venice (Criteria A/1/1) and embodies distinctive characteristics of the Japanese-influenced Craftsman style (Criteria C/3/3).

The Secretary of the Interior's Standards for Rehabilitation & Guidelines for Rehabilitating Historic Buildings (Standards) provide guidance for reviewing proposed work on historic properties, with the stated goal of making possible "a compatible use for a property through repair, alterations, and additions while preserving those portions or features which convey its historical, cultural, or architectural values." The Standards for Rehabilitation apply to this Project; an analysis of Preservation Standard Nos. 1 through 8 is provided in Appendix A. Projects that do not comply with the Standards may cause either a substantial or less-than substantial adverse change in the significance of a historic resource. The proposed project complies with Preservation Standards Nos. 3 through 8 and does not comply with Preservation Standards 1 and 2. Although the proposed project would have an adverse effect on the spatial relationship of the property, the recommended documentation efforts will sufficiently mitigate the effect. As stated, the proposed Project seeks to elevate and retain in place the rear building. The rear building would be preserved, retaining all historic character-defining features, remove only a recent concrete entry porch addition, and retain the building's south-facing orientation. Retaining all historic elements of the primary façade and secondary façades would ensure that the building retains integrity of design, materials, and workmanship. The structure would be used as a single-family dwelling. Mitigation Measures CR-1 and CR-2 require documentation of the existing historical resource through archival-quality as-built plans and photographs. Implementation of the mitigation measures would reduce potential impacts on historical resources to a less than significant level. (1639 & 1641 Abbott Kinney MND at p. 26.).

The MND identified the following mitigation measures:

MM-CR-1 Archival-quality as-built drawings of the rear building at 1639-1641 Abbot Kinney Boulevard shall be produced according to the guidelines established by the National Park Service, Historic Documentation Programs, Historic American Buildings Survey (HABS) (https://www.nps.gov/hdp/standards/HABS/HABSDrawings.pdf). Archival-quality copies of the as-built drawings shall be provided to OHR;

MM-CR-2 Two (2) archival-quality photographs of the rear building at 1639-1641 Abbot Kinney Boulevard shall be produced according to the guidelines established by the National Park Service, Historic Documentation Programs, Historic American Buildings Survey (HABS) (https://www.nps.gov/hdp/standards/PhotoGuidelines.pdf). One photograph should capture a representative view of the building's north façade, and one photograph should capture a representative view of the building's southern and eastern façades. Archival-quality copies of the photographs shall be provided to OHR.

- **Single-family residential:** Single-family residential projects may range in size and scale from smaller single-family homes to larger single-family homes, and from small-lot subdivisions to multi-property single-family subdivisions. Direct impacts could result from development on a property containing a historical resource or within a historic district, while indirect impacts could include alterations to a historical resource's setting. Residential subdivisions and other comparatively large-scale single-family development projects may have greater potential to directly or indirectly impact historical resources because their footprints would potentially encompass a larger number of properties and their greater scale would create more substantial visual effects. For example, the Edinburgh Avenue SLS Project, listed in Table 4-2, was a small single-family residential development that was found in its EIR to have significant unavoidable impacts to historic resources. The project located in the Hollywood Community Plan area proposed the construction of an 8 unit small lot subdivision and proposed to demolish a Spanish Colonial Revival style bungalow court containing eight one-bedroom apartments. The EIR found the following direct impacts:

  The Project would demolish the Bungalow Court and Garage, a LAHCM, and a historical resource under CEQA. Because the demolition of a historical resource constitutes a substantial adverse change to the resource such that its eligibility for listing would be lost, this impact is considered significant. To reduce potential impacts to historical resources, it is recommended that Photographic Recordation (Mitigation Measure MM-HIST-1) be prepared, which would include digital photographs of the Bungalow Court and Garage's existing appearance and character-defining features. Following implementation of MMHIST-1, mitigation is also proposed to pursue relocation of the Bungalow Court and Garage (Mitigation Measure MM-HIST-2), in accordance with the Standards for Rehabilitation. While relocation to a suitable site pursuant to Mitigation Measure MMHIST-2 would reduce impacts and retain the eligibility of the historical resource, it is unclear whether an interested party and suitable site would be found. Therefore, due to the uncertainty associated with relocation of the Bungalow Court and Garage, it is conservatively concluded that demolition could occur and that the impact of the Project on the historical resource would be significant and unavoidable.

- **ADUs:** ADUs include attached ADUs created through a building addition or conversion of existing floor area and detached ADUs of various scales. The development of an ADU would be less likely than

other development types to involve the demolition of a historical resource. However, such development could cause changes to a resource's significance through the alteration of a building or new construction on a property identified as a historical resource by altering its setting or introducing incompatible architectural elements. ADUs are typically incorporated into or behind main residences, and, because an ADU is typically subordinate to the residential building with which it shares a property, impacts would be unlikely to extend beyond the property.

- **Mixed use development:** Mixed use development could range in size and scale from neighborhood commercial mixed use with smaller nonresidential uses, to high-rise mixed-use with larger nonresidential uses. Direct impacts could result from development on a property containing a historical resource or construction of an incompatible building within the boundaries of a historic district. Indirect impacts could include alterations to a historic resource's setting. Similar to multi-family residential development, large-scale mixed-use development projects may have greater potential to indirectly impact historical resources. For example, as listed in Table 4-2, the Hollywood Center Project, a mixed-use development with a large multi-family residential component, would involve the construction of four buildings ranging from 11 to 46 stories with 1,005 residential units and 30,176 square feet of commercial uses on 4.46 acres, which included part of the campus for the Capital Records Complex including historical Capital Records and the Gogerty Building. The EIR analyzed potential direct and indirect impacts to the Capital Records Building, the Gogerty Building, and historical resources adjacent or in the vicinity to the project site, including the Hollywood Walk of Fame, Pantages Theatre, Avalon Hollywood, and Art Deco Commercial Building. The EIR found potential impacts to the Hollywood Walk of Fame and the Capital Records building and others from construction activities. The EIR found there would be no impacts to the Capital Record building from the design of the project:

  Protection of the historical significance of the Capitol Records Building is a stated objective of the Project. To meet that objective, the Project includes setbacks, grade-level open space, and tower massing that would maintain important public street views to the Capitol Records Building and would ensure that new construction would be appropriately distanced so that the mass and scale would not obscure the distinctive shape and architectural features of the Capitol Records Building from public view. The West and East Buildings, in relation to the Capitol Records Building, would be asymmetrically centered on Vine Street, to highlight the Capitol Records Building prominently. Both of the tower portions of the East Building and West Building would be convex shaped in plan with both buildings sited so that the tower mass tapers in toward Vine Street. On the East Site, the southwest corner of the proposed new tower component for the East Building would be set back 19.5 feet from Vine Street. The façade of the East Building would curve away from Vine Street, increasing the setback from Vine Street and pulling away from the Capitol Records Building. A paseo and grade-level public plaza would create a "buffer zone" between the East Site new

development and the Capitol Records Building so that visual prominence of the building along Vine Street would be maintained.

[…]

In addition to maintaining important views of the Capitol Records Building, the Project architecture has been purposely designed to respond to the architectural character of the Capitol Records Building, long celebrated as an outstanding example of Mid-Century Modern architecture. The Project architecture would maximize focal views toward and through the Project Site, as discussed in Section IV.A. Aesthetics (1) Scenic Vistas, such as views of the Capitol Records Building and the Gogerty Building from sidewalks … and intersection of Hollywood Boulevard and Vine Street…

(Hollywood Center DEIR at IV.C-58.)

In addition to noise vibration mitigation measures, the EIR proposed the following mitigation measures:

CUL-MM-1: Prior to any disturbance to the Hollywood Walk of Fame, a City of Los Angeles designated Historic-Cultural Monument, the Applicant shall contact the Hollywood Chamber of Commerce/Hollywood Historic Trust (Chamber/Trust) directly via letter detailing the location of the Project Site, its potential impact on the Hollywood Walk of Fame, Project timeframe, list of affected stars and surrounding sidewalk area, proposed procedures for removal of stars, where and for how long the stars would be stored, how they would be secured, and other relevant details. The Chamber/Trust would reply via letter with the required procedures related to alterations to the Hollywood Walk of Fame and a list of contractors approved for such work. Additionally, the Chamber/Trust would request a formal in-person meeting between the Applicant, Chamber/Trust officials, and staff from the Office of Historic Resources and Department of Public Works Bureau of Engineering to discuss the process in greater depth. Written correspondence to the Chamber/Trust shall be sent to the address that follows: Hollywood Chamber of Commerce, 6255 Sunset Boulevard, Suite 150, Hollywood, CA 90028. Accepting that specific details for removal, storage and, replacement of affected stars and terrazzo shall be determined through coordination with the Chamber/Trust, the following general procedures shall be implemented:

Photographic and documentary recordation of the location of each Hollywood Walk of Fame star potentially impacted by project construction shall be completed by a qualified architectural historian meeting the Secretary of the Interior's Professional Qualification Standards for Architectural History;

Prior to any construction or demolition activities that have the potential to damage the sidewalk along Vine Street, each section of sidewalk containing a star that cannot be reasonably protected in place shall be cut and carefully removed [by a qualified restoration contractor] within its respective bronze-bordered

square as specifically directed by Chamber/Trust procedures. Each affected star shall be promptly crated and stored, at a secured off-site location;

Following completion of Project construction, reinstallation of each affected star at its original documented location shall occur within a newly poured, color-matched terrazzo sidewalk [by a qualified restoration contractor] with work completed to the satisfaction of the Chamber/Trust, the Office of Historic Resources, and the Department of Public Works Bureau of Engineering; and

Excavation and construction activities in the vicinity of the Hollywood Walk of Fame and work conducted by the restoration contractor to remove, store, and replace affected areas of the Hollywood Walk of Fame, shall be monitored by a qualified historic preservation consultant meeting the Secretary of the Interior's Professional Qualification Standards for Architectural History and documented in a monitoring report that shall be provided to the City of Los Angeles, Office of Historic Resources, and the Chamber/Trust.

CUL-MM-2: Excavation and shoring have the potential to damage buildings in close proximity to the Project Site; therefore, the following procedures are required for shoring system design and monitoring of excavation, grading, and shoring activities are proposed:

Excavation and shoring plans and calculations for temporary shoring walls shall be prepared by a California Registered Civil Engineer experienced in the design and construction of shoring systems and hired under the excavation subcontractor. The shoring systems shall be selected and designed in accordance with all current code requirements, industry best practices, and the recommendations of the Project Geotechnical Engineer. Maximum allowable lateral deflections for the Project Site are to be developed by the Project Geotechnical Engineer in consideration of adjacent structures, property, and public rights-of-way. These deflection limits shall be prepared in consideration of protecting adjacent historic resources. The shoring engineer shall produce a shoring design, incorporating tie-backs, soldier piles, walers, etc., that is of sufficient capacity and stiffness to meet or exceed the Project strength and deflection requirements. Calculations shall be prepared by the shoring engineer showing the anticipated lateral deflection of the shoring system and its components and demonstrating that these deflections are within the allowable limits. Where tie-back anchors shall extend across property lines or encroach into the public rights-of-way, appropriate notification and approval procedures shall be followed. The final excavation and shoring plans shall include all appropriate details, material specifications, testing and special inspection requirements and shall be reviewed by the Project Geotechnical Engineer for conformance with the design intent and submitted to LADBS for review and approval during the Grading Permit application submission. The Project Geotechnical Engineer shall provide on-site observation during the excavation and shoring work.

The general contractor shall hire a California Registered Professional Engineer or California Professional Land Surveyor to prepare an Adjacent Structures Construction Monitoring Plan, subject to review and approval by LADBS, prior to initiation of any excavation, grading, or shoring activities to ensure the protection of adjacent historic resources from damage due to settlement during construction and excavation. The Adjacent Structures Construction Monitoring Plan shall be carried out by a California Professional Land Surveyor and establish survey monuments and document and record through any necessary means, including video, photography, survey, etc. the initial positions of adjacent structures, sidewalks, buildings, utilities, facades, cracks, etc. to form a baseline for determining settlement or deformation. Upon installation of soldier piles, survey monuments shall be affixed to the tops of representative piles so that deflection can be measured. The shored excavation and adjacent structures, sidewalks, buildings, utilities, facades, cracks, etc. shall be visually inspected each day. Survey monuments shall be measured at critical stages of dewatering, excavation, shoring, and construction but shall not occur less frequently than once every 30 days. Reports shall be prepared by the California Professional Land Surveyor documenting the movement monitoring results.

Appropriate parties shall be notified immediately and corrective steps shall be identified and implemented if movement exceeds predetermined thresholds, calculated amounts, or if new cracks or distress are observed in adjacent structures, sidewalks, buildings, utilities, façades, etc. In the event that settlement due to excavation or construction activity causes damage requiring touch-ups or repairs to the finishes of adjacent historic buildings, (specifically the Capitol Records Building, the Gogerty Building, Pantages Theatre, Avalon Hollywood, and 6316-24 Yucca Street/Art Deco Building storefront), that work shall be performed in consultation with a qualified preservation consultant and in accordance with the California Historical Building Code and the Secretary of the Interiors' Standards, as appropriate.

Foundation systems are to be designed in accordance with all applicable loading requirements, including seismic, wind, settlement, and hydrostatic loads, as determined by the California Building Code and in accordance with the recommendations provided by the Project Geotechnical Engineer. Foundation systems are anticipated to consist of a cast-in-place concrete mat foundations supported by cast-in-place concrete drilled shaft or auger cast piles. Driven piles shall not be used.

With mitigation the EIR concluded:

With implementation of mitigation measures, Project impacts to historical resources would be reduced to a less-than-significant level with the exception of potential temporary construction vibration and settlement effects on certain off-site historical resources (specifically the Pantages Theatre, Avalon Hollywood, and 6316-24 Yucca Street/Art Deco Building storefront). While the mitigation provided would avoid significant impacts on the Capitol Records Building and Gogerty Building and would

provide similar protections to the other buildings subject to potential structural damage from vibration and settlement, Mitigation Measure CUL-MM-2, presented above, and Mitigation Measure NOI-MM-4, presented in Section IV.I, Noise, of this EIR, would require the consent of other property owners who may not agree to participate in the mitigation measures; therefore, it is conservatively concluded that structural vibration and settlement impacts on certain historical resources adjacent to the Project Site would remain significant and unavoidable.

Potentially significant direct and indirect impacts to the Hollywood Walk of Fame during construction would be reduced to a less than significant level through implementation of Mitigation Measure CUL-MM-1 and associated requirements for the removal, storage, reinstallation and restoration of portions of the Hollywood Walk of Fame.

In another example the 8150 Sunset Boulevard mixed use project involved the demolition of a bank that was not listed in a national, state or local register but was found conservatively to be eligible as a local Historic-Cultural Monument. The impact was found to be potentially significant based on the demolition of the historical resource. The EIR identified mitigation including, relocation of two art works, recordation, and demolition monitoring and salvage as a measure to reduce impacts associated with the demolition of a significant historical resource on the project site. Under the demolition monitoring and salvage plan, a qualified architectural historian would monitor demolition activities, document fabric from the resource dating from the period of significance, and identify fabric from the building with the potential to be salvaged. Even with the mitigation measures, impacts were found to be significant and unavoidable:

…even with implementation of these mitigation measures the impact would remain significant and unavoidable. Mitigation Measure Hist-3, Relocation of Bank, involves a study to investigate the feasibility of relocation, and in the event relocation is determined feasible, and an interested party is found to relocate the Bank, it provides that it be carried out pursuant to a Rehabilitation and Relocation Plan. In the event relocation occurs, it would remove the Bank from its original location and context, and would have the potential to substantially impair the building through the relocation process. Nonetheless, if the Bank were to be relocated to a compatible location and rehabilitated in conformance with the Standards, impacts on historical resources would be reduced to a less than significant level. However, because relocation may be infeasible, and an interested party may not be found to relocate the Bank, it is conservatively concluded that impacts due to demolition of the Bank would remain significant and unavoidable after implementation of mitigation measures. (8150 Sunset Boulevard DEIR at p. 4.C.2-28 to 29.)

- **Conversion and/or rehabilitation:** Existing nonresidential, residential and mixed-use structures could be converted or rehabilitated for new residential uses. Such projects would not result in the demolition

of a historical resource but could involve alterations that would alter architectural features that contribute to a resource's historical significance. In addition, changes to a building located near an eligible resource or within a historic district could cause indirect impacts that undermine a resource's historical significance by altering its setting or introducing incompatible architectural elements into a historic district. Large-scale projects of this type may have a greater potential for indirect effect, such as detracting from a neighboring resource's historical setting. For example, the Crossroads Hollywood Project, as listed in Table 4-2, is a mixed-use project that would rehabilitate Crossroads of the World and the former Hollywood Reporter Building, demolish or relocate all other existing buildings, and construct eight mixed-use buildings. The project involved the demolition of six properties identified as historical resources through a survey evaluation. It also proposed to maintain the historic Crossroads of the World buildings but with some relocation. The EIR found the following potential impacts to relocation of one of the Crossroads of the World buildings:

> *The Crossroads of the World property is composed of nine buildings and their related circulation and site features. Together, these elements create a single historic resource. The Project proposes to relocate one small building located at the southwestern portion of the property. Referred to as the "Early American Building," the building to be relocated is designed in an American Colonial Revival style. The building consists of a linear configuration of individual store spaces just east of Las Palmas Avenue. The Early American Building is currently oriented east-west and located between Las Palmas Avenue and the northwestern corner of the Crossroads of the World "French Building," as shown in Figure IV.D-1 on page IV.D-19. The Early American Building would be relocated to the center of the Crossroads of the World property, re-oriented north-south in alignment with the other Crossroads buildings along the property's north-south pedestrian axis, and attached to proposed Building C2, as shown in Figure II-4 in Section II, Project Description, of this Draft EIR.*
>
> *Removal of a historic resource from its original physical location and setting has the potential to diminish the historic significance of a building. As discussed above,* **location** *is one of the seven aspects of historic integrity.* **Location** *is defined as the place where the historic property was constructed or the place where the historic event took place. When considering the criteria for eligibility, the National Park Service cautions that "the National Register criteria limit the consideration of moved properties because significance is embodied in locations and settings as well as in the properties themselves" when evaluating properties for listing in the National Register. This can be particularly sensitive for historic properties containing multiple buildings, such as Crossroads of the World, where the configuration of multiple buildings and the spatial relationships established by that configuration are important character-defining features of the historic resource. For evaluation of Crossroads of the World, the Crossroads property is considered a single historic resource.*

The National Park Service has established a special criterion for moved properties, Criteria Consideration B, as a guide to evaluating their potential historic significance. According to Criteria Consideration B, "a property removed from its original or historically significant location can be eligible if it is significant primarily for architectural value or it is the surviving property most importantly associated with a historic person or event." The guidance, however, goes on to state that "a moved property that is part of a complex but is of less significance than the remaining (unmoved) buildings" does not need to meet Criteria Consideration B in order to be considered. Because the Early American Building is one component of the larger Crossroads of the World complex and is the smallest of nine component buildings, Criteria Consideration B does not apply.

Issues relating to relocation are also addressed in the Secretary of the Interior's Standards for Rehabilitation. Standard 2 states: "The historic character of a property will be retained and preserved. The removal of distinctive materials or alteration of features, spaces, and spatial relationships that characterize a property will be avoided." Relocation of the Early American Building would alter the original plan and configuration of the Crossroads of the World property by relocating one of its nine component buildings. The Early American Building was constructed in an east-west orientation with its shopfronts facing north. It was designed in anticipation of a second phase of Crossroads development that would have added additional storefronts located north and parallel to the Early American Building with storefronts facing south to create a second, east-west pedestrian axis connecting Crossroads to Las Palmas Avenue. Additional construction would have filled in the open space between the northern and southern Crossroads buildings along the north-south axis to create a T-shaped internal circulation pattern with access from Sunset Boulevard, Selma Avenue, and Las Palmas Avenue. Because the second phase was never implemented, the Early American Building's storefronts face a surface parking lot and the originally intended east-west internal "street" was never built.

All of the other eight Crossroads buildings would remain in their original location after implementation of the Project. These buildings, oriented along the north-south central pedestrian axis between Sunset Boulevard and Selma Avenue, establish the primary configuration of buildings and open spaces that characterize the property and define the property's important spatial relationships. The Early American Building is the smallest of the nine Crossroads buildings and because of its location and orientation, it has little spatial relationship with the other buildings. After relocation of the Early American Building, the majority of the original configuration of buildings and spatial relationships that characterize the Crossroads of the World property would remain intact and unaltered. In addition, all other aspects of the Crossroads of the World property would retain existing distinctive materials, features, and spaces and, as such, would not have an impact on the National Register or California Register listing as it would not reduce the historic integrity or significance of this resource. However, relocation of the Early American Building has the potential to imply a false historic condition. Specifically, moving existing historic fabric to a new location has

the potential to create a false sense of historical development at Crossroads of the World, which could result in a significant impact to historic resources. However, with implementation of Mitigation Measure D-2, which entails consultation with a preservation architect or other qualified professional during planning and implementation of the proposed relocation of the Early American Building to ensure minimal loss of original materials and other character-defining features during and after relocation, and Mitigation Measure D-5, which entails inclusion of an interpretive program on-site to address the

In addition to relocation, the Project also proposes to alter the Early American Building by attaching it to the proposed new construction. However, all other aspects of the Crossroads of the World property would retain existing distinctive materials, features, and spaces and, as such, would not have an impact on the National Register or California Register listing as it would not significantly reduce the overall historic integrity or significance of this resource. Furthermore, implementation of Mitigation Measure D-3 provided below would ensure that the proposed connection would be completed in conformance with the Secretary of the Interior's Standards for Rehabilitation. Thus, potential impacts associated with alteration of the Early American Building would be reduced to less-than-significant levels.

The EIR proposed the following mitigation measures:

Mitigation Measure D-1: The existing condition of the Crossroads of the World property shall be documented in accordance with Historic American Building Survey (HABS) guidelines and standards. Documentation shall include historic narrative, existing drawings and plans, and photographs of the property.

Mitigation Measure D-2: Planning and implementation of the relocation of the Crossroads of the World "Early American Building" shall include consultation with a preservation architect or other qualified professional to ensure minimal loss of original materials and character-defining features during and after relocation.

Mitigation Measure D-3: The connection of the proposed Building C2 to the Crossroads of the World "Early American Building" shall be designed and completed in accordance with the Secretary of the Interior's Standards and Guidelines for Rehabilitation. The final design will require the approval of the Planning Department Office of Historic Resources.

Mitigation Measure D-4: The Crossroads of the World "Early American Building" shall be rehabilitated in accordance with the Secretary of the Interior's Standards and Guidelines for Rehabilitation. The final design will require the approval of the Planning Department Office of Historic Resources.

Mitigation Measure D-5: The Project shall include an interpretive program located on the Crossroads of the World property which addresses the original location and relocation of the Early American Building and informs the public about the history and original configuration of the Crossroads of the World property.

Mitigation Measure D-6: The Project design team shall consult with a preservation architect or other qualified professional to ensure that Building C1, Building C2, Building C3, and Building D1 are designed and constructed in accordance with the Secretary of the Interior's Standards for Rehabilitation to ensure that the proposed new construction would protect the historic integrity of the Crossroads of the World property and adjacent historic resources, including the First Baptist Church and the 1932 Art Deco office building at 1618 Las Palmas Avenue. The final design will require the approval of the Planning Department Office of Historic Resources.

Mitigation Measure D-7: The Project shall include a shoring plan to ensure the protection of adjacent historic resources, including, but not limited to, Crossroads of the World, First Baptist Church, and the 1932 Art Deco office building at 1618 Las Palmas Avenue, during construction from damage due to underground excavation, vibration, and general construction procedures and to reduce the possibility of damage from vibration and settlement due to the removal of adjacent soil.

Mitigation Measure D-8: A Historic Structure Report (HSR) shall be developed for the Crossroads of the World property to document its historic significance, identify character-defining features, and establish treatments for its continued preservation. The HSR shall be developed in accordance with Preservation Brief 43, The Preparation and Use of Historic Structure Reports available from the National Park Service.

With the mitigation measures, the Crossroads of the World EIR concluded as follows:

The Project would require the demolition of six properties identified as historic resources through survey evaluation. These impacts cannot be mitigated to a less-than-significant level.

The Project would relocate one building on the Crossroads of the World property that has the potential to create a false sense of historic development. However, with implementation of Mitigation Measure D-5, impacts would be less than significant.

The Project would construct a new building that connects to one original building on the Crossroads of the World property. This connection has the potential to reduce the historic integrity of the Crossroads of the World property. However, with implementation of Mitigation Measure D-3, impacts would be less than significant.

The Project would construct three new buildings that have the potential to reduce the historic integrity of the Crossroads of the World property. However, with implementation of Mitigation Measure D-6, impacts would be less than significant.

Most individual developments accommodated under the Housing Element Update would be unlikely to involve impacts to cultural resources. However, given the high number of proposed units in the RHNA

and developments and the high number of historical resources in the City, impacts to individual resources are possible.

As discussed above in *Regulatory Framework*, existing permitting and environmental review procedures established by the LAMC limit impacts to historical resources by regulating demolition, removal, or alteration of known historical resources. Section 12.20.3 of the LAMC regulates demolition or construction within an HPOZ. Generally, such work must conform to the Secretary's Standards and/or the preservation plan adopted for the HPOZ and, as such, must be "undertaken in a manner that does not impair the essential form and integrity" of the HPOZ. In addition, as listed under Regulatory Compliance Measure, RCM-CR-1 references applicable standards of LAMC Section 91.106.4.5, which provides procedures for the demolition, alteration, or removal of any historical resource that has been officially designated, or has been determined by State or federal action to be eligible for designation, on the National Register, or has been included on the City of Los Angeles list of HCMs. However, the relevant ordinance would not prohibit the demolition of a historical resource and does not apply to properties listed in or determined to be eligible for the California Register or local register, or those found eligible in a survey, such as SurveyLA or the CRA/LA Survey, which would also qualify as historical resources pursuant to PRC Section 21804.1 and Section 15064.5(a) CEQA Guidelines. Impacts to historical resources associated with housing development that could occur under the project would be ***potentially significant***.

Mitigation Measures

The following mitigation measures apply to discretionary housing development projects:

4.4-1(a) Identification of Built-Environment Historical Resources

For any discretionary development project involving a property that is a known or potential historical resource, in accordance with the CEQA Guidelines, the following procedures shall be implemented to identify historical resources located on a development site and implement appropriate techniques to avoid or reduce significant impacts to historical resources.

During the project planning phase, a cultural resources record search shall be conducted via the South Central Coastal Information Center (SCCIC) to determine whether the project area has been subject to previous cultural resources studies and whether historical resources were identified.

The City of Los Angeles Historic Resources Survey (SurveyLA) results shall be consulted to determine whether the project area has been subject to previous cultural resources studies and whether historical resources were identified.

If a development involves the alteration or demolition of a property 45 years of age or older that has not been evaluated previously a historical resources evaluation shall be prepared for the development. The evaluation shall be prepared according to the following standards:

- The evaluation shall be prepared by a qualified architectural historian or historian who meets the Secretary of the Interior's Professional Qualifications Standards (PQS) in architectural history or history.
- The qualified architectural historian or historian shall conduct an intensive-level evaluation in accordance with the guidelines and best practices promulgated by the State Office of Historic Preservation (OHP) and the City of Los Angeles Office of Historic Resources (OHR) to identify any potential historical resources within the Area of Potential Effects.

All buildings and structures 45 years of age or older not located in an HPOZ shall be evaluated within their historic context and documented in a report meeting the OHP and OHR guidelines. All evaluated properties shall be documented on Department of Parks and Recreation Series 523 Forms. The report shall be submitted to the OHR for review and concurrence. If, as a result of the cultural resources records search or the subsequent historical resources evaluation, it is determined that the proposed development would result in a significant adverse effect to one or more historical resources, appropriate techniques consistent with the Secretary of Interior Standards to avoid or reduce significant impacts to the degree feasible shall be implemented. Measures to reduce impacts shall generally be overseen by a qualified architectural historian or historic architect meeting the PQS, unless unnecessary under the circumstance (e.g., preservation in place). In conjunction with any development application that may affect the historical resource, a report identifying and specifying the treatment of character-defining features and construction activities shall be provided to the City for review. Measures may include but not be limited to mitigation measures 4.4-1(b) to 4.4-1(j) below.

4.4-1(b) Rehabilitation of Historical Resources

If a development proposes alteration or addition to a historical resource to allow for its continued use, the integrity of the resource could be undermined such that it would no longer convey the historical associations that make it eligible for listing. To reduce such impacts, a resource may be rehabilitated in conformance with the Secretary's Standards to allow for continued or new uses while maintaining features that convey the resource's historical significance. Construction of a project as it relates to rehabilitation of a historical resource shall be monitored for compliance with the Secretary's Standards. The construction monitoring shall:

- Be performed by a professional meeting the Secretary of the Interior's Professional Qualifications Standards (PQS) for historic architecture with at least five years of demonstrated experience in rehabilitating historic buildings of similar size.
- Be performed by the professional at regular intervals during the rehabilitation of the historical resource. The intervals shall include, but not necessarily limited to 50 percent, 90 percent, and 100 percent construction.

  The monitor shall create a technical memorandum at each interval summarizing the findings, making recommendations as necessary to ensure compliance with the Secretary's Standards, and documenting construction with digital photographs. Compliance with the Secretary's Standards shall include the review specifications, tests, and mockups for the treatment of historic building materials.

  The monitor shall submit the memoranda to City of Los Angeles Office of Historic Resources (OHR) for concurrence. In the event OHR does not concur, all activities shall cease until compliance with the Secretary's Standards is resolved and concurrence is obtained.

4.4-1(c) Design Requirements for New Construction

If a development proposes new construction on a site containing a historical resource, the project design team shall consult with a preservation architect or other qualified professional to ensure that new construction is designed and constructed in accordance with the Secretary of Interior's Standards to ensure the proposed new construction would protect the historic integrity of the historical resource and any adjacent historical resources. The final design shall require the approval of OHR. In the event OHR does not concur, all activities shall cease until compliance with the Secretary's Standards is resolved and concurrence is obtained.

4.4-1(d) Relocation and Rehabilitation of Historical Resources

For any project for which retention or rehabilitation of a historical resource is not feasible, a feasibility study, subject to City review and approval, shall be prepared weighing the costs, advantages, and disadvantages of relocation, which would preclude the demolition of a resource by removing it intact to another site. If the study concludes it is feasible to relocate the historical resource, the structure's availability shall be advertised in historic preservation websites such as HistoricForSale, Historic Properties, Old Houses, and Preservation Directory and a local newspaper such as the Los Angeles Times for a period of not less than 60 days by the project applicant. Any such relocation efforts shall be undertaken in accordance with a Relocation and Rehabilitation Plan prepared by the party taking possession of the structure to be moved. The Relocation and Rehabilitation Plan shall be developed in conjunction with a qualified architectural historian, historic architect, or historic preservation professional who satisfies the Secretary of the Interior's Professional Qualifications Standards (PQS)

for History, Architectural History, or Architecture, pursuant to 36 CFR 61. The Plan shall include relocation methodology recommended by the National Park Service, which are outlined in the booklet entitled "Moving Historic Buildings," by John Obed Curtis (1979). Upon relocation of the structure to the new site, any maintenance, repair, stabilization, rehabilitation, preservation, conservation, or reconstruction work performed in conjunction with the relocation of the building shall be undertaken in a manner consistent with the Secretary's Standards. The Relocation and Rehabilitation Plan shall be reviewed and approved by the City of Los Angeles Office of Historic Resources (OHR) prior to its implementation. In addition, a plaque describing the date of the move and the original location shall be placed in a visible location on of the historical resource. If after three months it is evident that no party is interested in purchasing the historical resource per the mitigation measure stipulated above, then the Historic American Building Survey (HABS) Level II documentation, as described below in Mitigation Measure 4.4-1(d), would be required to document the important history and architecture of the historical resource. Relocation shall not take place until the historical resource is first recorded pursuant to the HABS Level II requirements.

Any relocation activities undertaken by third parties shall be fully completed prior to the commencement of construction activities. The relocated historical resource shall be moved in accordance with all applicable regulatory requirements, including those applicable provisions of Chapter 83 of the Los Angeles Building Code, and shall be moved during off-peak hours so as to avoid potential traffic impacts.

4.4-1(e) Historic American Building Survey Documentation

If significant historical resources are identified on a development site and avoidance or compliance with the Secretary's Standards are not possible, prior to development activities, the project applicant shall prepare a Historic American Buildings Survey (HABS) Level II documentation for the historical resource and remaining historic property setting. The HABS document shall be prepared by a qualified architectural historian, historic architect, or historic preservation professional who satisfies the Secretary of the Interior's PQS for History, Architectural History, or Architecture, pursuant to 36 CFR 61. This document shall record the history and architecture of the property, as well as important events or other significant contributions to the patterns and trends of history with which the property is associated, as appropriate. The property's physical condition, both historic and current, shall be documented through site plans; historic maps and photographs; original as-built drawings; large format photographs; and written data. Building exteriors, representative interior spaces, character-defining features, as well as the property setting and contextual views shall be documented. Field photographs and notes shall also be included. All documentation components shall be completed in accordance with the Secretary of the Interior's Standards and Guidelines for Architectural and

Engineering Documentation. The HABS documentation shall be submitted to the National Park Service for transmittal to the Library of Congress, and archival copies shall be sent to the City of Los Angeles Office of Historic Resources (OHR) and Los Angeles Public Library. Per the Secretary of the Interior's Standards for Architectural and Engineering Documentation, preparation of the HABS document serves to "[provide] important information on a property's significance for use by scholars, researchers, preservationists, architects, engineers and others interested in preserving and understanding historic properties."[33]

4.4-1(f) Interpretive Program

If avoidance of the historical resource is not feasible, the project shall include an interpretive display located on the property which addresses the historical context and architectural or historical significance of the resource and informs the public about the history and original configuration of the property. The display shall be reviewed and approved by the City prior to installation at a site to be chosen by the City.

4.4-1(g) Construction Monitoring, Salvage, and Reuse

If retention of a historical resource is not feasible, and the historical resource is significant for its architectural design or construction method, the project applicant shall retain a qualified architectural historian or historic preservation professional who satisfies the Secretary of the Interior's Professional Qualifications Standards (PQS) for Architectural History to conduct construction monitoring and salvage during demolition. Any important historic fabric associated with the historical resource's period of significance shall be fully recorded in photographic images and written manuscript notes. Prior to the commencement of demolition, significant material shall be inventoried and evaluated for potential salvage, analysis, reuse, and interpretation. The qualified architectural historian or historic preservation professional shall prepare the necessary written and illustrated documentation in a construction monitoring and salvage report. This document shall record any historically significant construction methods completed during the period of significance as well as document the historical resource's present physical condition through site plans; historic maps and photographs; sketch maps; digital photography; and written data and text.

A salvage and reuse plan shall be created, identifying elements and materials that can be saved prior to the issuance of a demolition permit. The plan shall be prepared by a qualified architectural historian or historic preservation professional with demonstrated experience in developing salvage and reuse

[33] National Park Service. "Archaeology and Preservation: Secretary of the Interior's Standards and Guidelines [As Amended and Annotated], Secretary of the Interior's Standards for Architectural and Engineering Documentation," n.d. https://www.nps.gov/history/local-law/arch_stnds_6.htm. Accessed April 9, 2021.

plans. The plan shall be submitted to the City of Los Angeles Office of Historic Resources. Elements and materials that may be salvageable include: windows, doors, roof tiles, decorative elements, framing members, light fixtures, plumbing fixtures, and flooring materials such as tiles and hardwood. The salvageable items shall be removed in the gentlest, least destructive manner possible. The plan shall identify the recipient(s) for the items.

All documentation components shall be completed in accordance with the Secretary of the Interior's Standards and for Archaeological Documentation for above ground structures. The completed documentation shall be placed on file at the South Central Coastal Information Center, California State University, Fullerton, California; and the City of Los Angeles Public Library. Findings shall be incorporated into the Historic American Buildings Survey (HABS) report.

4.4-1(h) Temporary Protective Relocation

For projects for which development would have the potential to cause damage to a historical resource and the resource cannot be protected in place, if feasible, the resource may be temporarily relocated to prevent such damage. Prior to development, the applicant shall contact stakeholders directly via letter detailing the location of the project site, its potential impact on the resource, project timeframe, identification of the affected resource, proposed procedures for removal resource or parts of resource with affected, where and for how long the resource would be stored, how it would be secured, and other relevant details. Photographic and documentary recordation of the potentially impacted resource shall be completed by a qualified architectural historian meeting the PQS for Architectural History. Prior to any construction or demolition activities that have the potential to damage the resource, elements that cannot be reasonably protected in place shall be carefully removed by a qualified restoration contractor. Each removed element shall be promptly stored at a secured off-site location. Following completion of project construction, reinstallation of each affected element at its original documented location shall occur [by a qualified restoration contractor] with work completed to the satisfaction of the OHR, and the Department of Public Works Bureau of Engineering, and other interested parties. Excavation and construction activities in the vicinity of the resource and work conducted by the restoration contractor to remove, store, and replace affected elements, shall be monitored by a qualified historic preservation consultant meeting the PQS for Architectural History and documented in a monitoring report that shall be provided to OHR, and other interested parties.

4.4-1(i) Excavation and Shoring Plan

For projects in which excavation and shoring have the potential to damage a historical resource in close proximity to the project site, an excavation and shoring plan shall be implemented to reduce the likelihood that earth-moving activities will result in damage to the historical resource due to earth

moving activities. Procedures shall be implemented for shoring system design and monitoring of pre-excavation, grading, and shoring activities:

- Excavation and shoring plans and calculations for temporary shoring walls shall be prepared by a California Registered Civil Engineer experienced in the design and construction of shoring systems and hired under the excavation subcontractor. The shoring systems shall be selected and designed in accordance with all current code requirements, industry best practices, and the recommendations of the Project Geotechnical Engineer. Maximum allowable lateral deflections for the project site are to be developed by the Geotechnical Engineer in consideration of adjacent structures, property, and public rights-of-way. These deflection limits shall be prepared in consideration of protecting adjacent historic resources. The shoring engineer shall produce a shoring design, incorporating tie-backs, soldier piles, walers, or other means of reinforcement, that is of sufficient capacity and stiffness to meet or exceed the strength and deflection requirements. Calculations shall be prepared by the shoring engineer showing the anticipated lateral deflection of the shoring system and its components and demonstrating that these deflections are within the allowable limits. Where tie-back anchors shall extend across property lines or encroach into the public rights-of-way, appropriate notification and approval procedures shall be followed. The final excavation and shoring plans shall include all appropriate details, material specifications, testing and special inspection requirements and shall be reviewed by the Geotechnical Engineer for conformance with the design intent and submitted to the Los Angeles Department of Building and Safety (LADBS) for review and approval during the grading permit application submission. The Geotechnical Engineer shall provide on-site observation during the excavation and shoring work.
- The general contractor shall hire a California Registered Professional Engineer or California Professional Land Surveyor to prepare an Adjacent Structures Construction Monitoring Plan, subject to review and approval by LADBS, prior to initiation of any excavation, grading, or shoring activities to ensure the protection of adjacent historic resources from damage due to settlement during construction and excavation. The Adjacent Structures Construction Monitoring Plan shall be carried out by a California Professional Land Surveyor and establish survey monuments and document and record through any necessary means, including video, photography, survey, etc. the initial positions of adjacent structures, sidewalks, buildings, utilities, facades, cracks, etc. to form a baseline for determining settlement or deformation. Upon installation of soldier piles, survey monuments shall be affixed to the tops of representative piles so that deflection can be measured. The shored excavation and adjacent structures, sidewalks, buildings, utilities, facades, cracks, etc. shall be visually inspected each day. Survey monuments shall be measured at critical stages of dewatering, excavation, shoring, and construction but shall not occur less frequently than

once every 30 days. Reports shall be prepared by the California Professional Land Surveyor documenting the movement monitoring results.

- Appropriate parties shall be notified immediately, and corrective steps shall be identified and implemented if movement exceeds predetermined thresholds, calculated amounts, or if new cracks or distress are observed in adjacent structures, sidewalks, buildings, utilities, façades, etc. In the event that settlement due to excavation or construction activity causes damage requiring touch-ups or repairs to the finishes of adjacent historic buildings, that work shall be performed in consultation with a qualified preservation consultant and in accordance with the California Historical Building Code and the Secretary's Standards, as appropriate.
- Foundation systems are to be designed in accordance with all applicable loading requirements, including seismic, wind, settlement, and hydrostatic loads, as determined by the California Building Code and in accordance with the recommendations provided by the Geotechnical Engineer.

4.4-1(j) Structural Construction Monitoring

For developments in which excavation and shoring have the potential to damage a historical resource in close proximity to the project site, construction monitoring shall be implemented to minimize damage to nearby historical resources. The construction monitoring shall be performed by a licensed structural engineer with at least five years of demonstrated experience in rehabilitating historic buildings of similar size. A survey the existing foundations and other structural aspects of historical resources in close proximity to the site shall be conducted to establish baseline conditions and provide a shoring design to protect the historical resources from potential damage. The survey shall take place prior to any construction activities. Pot holing or other destructive testing of the below grade conditions on the development site and immediately adjacent to the nearby historical resources may be necessary to establish baseline conditions and prepare the shoring design. A construction monitor shall submit to OHR a pre-construction survey that establishes baseline conditions to be monitored during construction, prior to issuance of any building permit for the development. The monitoring process shall include a meeting with the project contractor prior to the demolition and/or excavation activities to discuss minimizing damage to historical resources in close proximity.

Significance After Mitigation

Implementation of Mitigation Measures 4.4-1(a) through 4.4-1(j) would reduce potentially significant impacts to historical resources to the maximum extent feasible. This would be accomplished by requiring a process for the identification of known and potential historical resources (i.e., Mitigation Measures 4.4-1(a)), and measures to ensure compliance with the Secretary of the Interior's Standards for rehabilitation,

new construction, or relocation (i.e., Mitigation Measures 4.4-1(b), 4.4-1(c), and 4.4-1(d)). If compliance with the Standards is not feasible, documentation of the resource pursuant to HABS standards (i.e., Mitigation Measure 4.4-1(e)), the installation of interpretive displays (i.e., Mitigation Measure 4.4-1(f)), and/or construction monitoring and salvage of historical building materials (i.e., Mitigation Measure 4.4-1(g)) would be required. In addition, mitigation measures for the protection of historical resources located in close proximity to construction sites include the temporary relocation of historical resources, excavation and shoring planning, and structural construction monitoring (i.e., Mitigation Measures 4.4-1(h), 4.4-1(i), and 4.4-1(j)). Compliance with Secretary's Standards, however, cannot be assured in all cases and demolition or removal of a historically significant resource typically cannot be mitigated to below a level of significance under CEQA. Additionally, the City finds as a policy applying the mitigation measures to ministerial projects is not feasible. Based on these possibilities, potential impacts to historical resources associated with implementation of the Housing Element Update remain ***significant and unavoidable***.

Threshold 4.4-2	Would the project cause a substantial adverse change in the significance of an archaeological resource pursuant to § 15064.5?

Impact 4.4-2 Implementation of the Housing Element Update could result in development that could cause a substantial adverse change in or disturbance of known or unknown archaeological resources as defined in CEQA Guidelines Section 15064.5. Mitigation Measures 4.4-2, 4.15-1(a), and 4.15-1(b) could avoid significant direct impacts to archaeological resources to the maximum extent feasible and provide for recovery of any significant resources that cannot be preserved in place. However, it is not feasible to impose the mitigation measure on all future projects and even with imposition of mitigation measures, impacts may occur based on unique circumstances unknown at this time. Therefore, impacts to archaeological resources would be ***significant and unavoidable.***

Ground-disturbing activities associated with development accommodated under the Housing Element Update, particularly in areas that have not been studied through a cultural resources investigation, or when excavation depths exceed those previously attained, have the potential to damage or destroy previously-unknown historic or prehistoric archaeological resources that may be present on or below the ground surface. Because human habitation across Los Angeles occurred during the Prehistoric, Spanish, Mexican, and American periods, sites considered sensitive for archaeological resources are present throughout the City, particularly in areas where water sources are present, such as rivers and areas around mountains where resources would have been abundant. Development throughout Los Angeles has encountered subsurface archaeological resources, such as remnants of historic archaeological sites that may contain

refuse deposits and privies associated with the early growth of the City. In addition, there are known significant archaeological sites dating from the city's period of early growth, including the Zanja Madre aqueduct and artifact deposits associated with the city's 1860s-1930s Chinatown. Consequently, damage to or destruction of, previously-unknown sub-surface cultural resources could occur as a result of development under the Housing Element Update that involves disturbance within native soils. Such damage or destruction would constitute a significant impact under CEQA.

The types of housing units accommodated under the Housing Element Update would generally fall into five categories of development projects - multi-family residential development; single-family residential development; ADUs; mixed use development; and conversion and/or rehabilitation of existing nonresidential, residential and mixed-use structures to be used for housing. The potential to cause ground disturbance would vary according to project type. Further discussion of the potential impacts of these project types follows.

- **Multi-family residential:** Multi-family residential projects may range in size from small apartment buildings with 2-10 units to larger apartment buildings and high-rise structures with more than 200 units. Because new construction would be required, multi-family developments of any size would cause ground disturbance. Large multi-family development projects may have the potential to result in more substantial impacts due to their greater footprint and because such features as subsurface parking structures would cause a greater depth of disturbance. However, some types of multi-family developments, such as permanent supportive housing and single-resident occupancy development, may result in different impacts, because parking requirements could differ (surface parking, rather than subterranean, for example). For example, the 6220 West Yucca Project, as listed in Table 4-2, was a large multi-family residential development consisting of a new 20-story and a new three-story building. The EIR found the following:

  The Project would include the demolition of the existing uses at the Project Site and the construction of up to two and-a-half levels of subterranean parking that would warrant excavation to depths of approximately 22 to 25 feet below surface for the subterranean parking levels, with footings extending down to approximately 40 feet below ground surface. As discussed above, no known historic archaeological or prehistoric archaeological resources haven been identified within the Project Site or within a half mile radius of the Project Site. Review of Sanborn Maps indicated that the residence of Albert G. Bartlett, the owner of Bartlett Sheet Music in downtown Los Angeles, was formerly located within the Project Site and was considered one of the finest of the era. According to historic aerial photography review, the Bartlett residence was razed between 1923 and 1948. Between 1952 and 1954, the three apartment buildings that currently exist within the Project Site were constructed in the former location of the Bartlett residence. Since the apartment buildings do not have basements, there is potential that historic archaeological resources associated

with the Bartlett residence (e.g. refuse pits, privies, structural remains, etc.) have been preserved below the foundations of the apartments and below the surface parking lot within the Project Site. The other two buildings that currently exist within the Project Site were constructed in 1918 (1765 North Vista del Mar Avenue) and 1920 (1765 North Vista del Mar Avenue) as single-family residences and have been significantly altered over the years.

Since the Project Site has the potential to retain buried resources associated with the Bartlett residence that have at least some potential of being historic or unique archeological resources, the potential to encounter such subsurface archaeological resources during the construction of the Project is considered moderate. Due to this potential, impacts on archeological resources are considered significant prior to mitigation. Mitigation Measures MM-ARCH-1 through MM-ARCH-3 are therefore identified below to reduce potentially significant impacts to buried/unknown unique archaeological resources to a less than significant level. (6220 Yucca DEIR at IV.C-39.)

The EIR proposed the following mitigation measures which were found to reduce impacts to a less than significant level:

MM-ARCH-1: Prior to the issuance of a demolition permit, the Applicant shall retain a qualified Archaeologist who meets the Secretary of the Interior's Professional Qualifications Standards (qualified Archaeologist) to oversee an archaeological monitor who shall be present during construction excavations such as demolition, clearing/grubbing, grading, trenching, or any other construction excavation activity associated with the Project. The frequency of monitoring shall be based on the rate of excavation and grading activities, the materials being excavated (younger sediments vs. older sediments), and the depth of excavation, and if found, the abundance and type of archaeological resources encountered. Full-time monitoring may be reduced to part-time inspections, or ceased entirely, if determined adequate by the qualified Archaeologist. Prior to commencement of excavation activities, an Archaeological Sensitivity Training shall be given for construction personnel. The training session, shall be carried out by the qualified Archaeologist, will focus on how to identify archaeological resources that may be encountered during earthmoving activities, and the procedures to be followed in such an event.

MM-ARCH-2: In the event that historic (e.g., bottles, foundations, refuse dumps/privies, railroads, etc.) or prehistoric (e.g., hearths, burials, stone tools, shell and faunal bone remains, etc.) archaeological resources are unearthed, ground-disturbing activities shall be halted or diverted away from the vicinity of the find so that the find can be evaluated. An appropriate buffer area shall be established by the qualified Archaeologist around the find where construction activities shall not be allowed to continue. Work shall be allowed to continue outside of the buffer area. All archaeological resources unearthed by Project construction activities shall be evaluated by the qualified Archaeologist. If a resource is determined by the qualified Archaeologist to constitute a "historical resource" pursuant to CEQA Guidelines Section 15064.5(a) or a "unique

archaeological resource" pursuant to Public Resources Code Section 21083.2(g), the qualified Archaeologist shall coordinate with the Applicant and the City to develop a formal treatment plan that would serve to reduce impacts to the resources. The treatment plan established for the resources shall be in accordance with CEQA Guidelines Section 15064.5(f) for historical resources and Public Resources Code Sections 21083.2(b) for unique archaeological resources. Preservation in place (i.e., avoidance) is the preferred manner of treatment. If preservation in place is not feasible, treatment may include implementation of archaeological data recovery excavations to remove the resource along with subsequent laboratory processing and analysis. Any archaeological material collected shall be curated at a public, non-profit institution with a research interest in the materials, such as the Fowler Museum, if such an institution agrees to accept the material. If no institution accepts the archaeological material, they shall be donated to a local school or historical society in the area for educational purposes.

MM-ARCH-3: Prior to the release of the grading bond, the qualified Archaeologist shall prepare a final report and appropriate California Department of Parks and Recreation Site Forms at the conclusion of archaeological monitoring. The report shall include a description of resources unearthed, if any, treatment of the resources, results of the artifact processing, analysis, and research, and evaluation of the resources with respect to the California Register of Historical Resources and CEQA. The report and the Site Forms shall be submitted by the Project applicant to the City, the South Central Coastal Information Center, and representatives of other appropriate or concerned agencies to signify the satisfactory completion of the development and required mitigation measures.

- **Single-family residential:** Single-family residential projects may range in size and scale from smaller single-family homes to larger single-family homes, and from small-lot subdivisions to multi-property single-family subdivisions. Single-family developments of any size would cause ground disturbance. However, large single-family development projects, such as residential subdivisions, may have the potential to result in more substantial impacts due to their greater footprint and depth of ground disturbance. For example, the Hidden Creeks Project, as listed in Table 4-2, was a large single-family residential development consisting of 188 single family residences, a park, and an equestrian boarding facility on a 259-acre development site near Porter Ranch. The EIR found the following:

  The project site is not known to contain archaeological resources of any kind, including human remains or tribal cultural resources, based on searches of the California Historical Resources Information System (CHRIS), Natural History Museum (as described in the Phase 1 Archeological Survey), and Sacred Lands File, provided in Appendix D. Based on this fact, development of this property would not have a high potential to result in adverse impacts to cultural resources. However, excavation of the project site has the potential to disturb unknown resources, causing a potentially significant impact upon those resources. In the event of an unexpected disturbance, significant impacts to archaeological resources could occur. If human remains are unearthed, California Health and Safety Code Section 7050.5 requires that no further disturbance shall occur

until the County coroner has made the necessary findings as to origin and disposition pursuant to Public Resources Code Section 5097.98. If the remains are determined to be of Native American descent, the coroner has 24 hours to notify the Native American Heritage Commission (NAHC). The NAHC will then contact the most likely descendant of the deceased Native American, who will then serve as consultant on how to proceed with the remains (i.e., avoid, rebury). However, implementation of mitigation measure MM-CR-7 and compliance with California Health and Safety Code Section 7050.5, which requires that no further disturbance shall occur until the County coroner has made the necessary findings as to origin and disposition pursuant to Public Resources Code Section 5097.98, would reduce potentially significant impacts to a less than significant level.

The EIR identified the following mitigation which was found to reduce impacts to less than significant:

MM-CR-7 In the event that archaeological resources are unearthed during project subsurface activities, all earth disturbing work within a 200-meter radius must be temporarily suspended or redirected until a qualified archaeologist has evaluated the nature and significance of the find. Any artifacts uncovered shall be recorded and removed for storage at a location to be determined by the archaeologist. Construction on other parts of the project will be subject to Public Resources Code Section 21083.2(i). After the find has been appropriately recovered, work in the area may resume.

- **ADUs:** ADUs include attached ADUs created through a building addition or conversion of existing floor area and detached ADUs of various scales. ADUs are typically incorporated into or behind main residences. Development of ADUs involving the conversion of existing floor area would be unlikely to cause ground disturbance and would not be likely to impact archaeological resources. The development of an ADU involving new construction would cause ground disturbances but would be less likely than other development types to involve impacts to an archaeological resource due to their comparatively small footprint and depth of ground disturbance.
- **Mixed use development:** Mixed use development could range in size and scale from neighborhood commercial mixed use with smaller nonresidential uses, to high-rise mixed-use with larger nonresidential uses. Mixed use developments of any size would cause ground disturbance. However, large-scale mixed use development projects may have greater potential to result in substantial impacts to an archaeological resource due to their potential to have a greater footprint and depth of ground disturbance, including through the construction of under-ground parking structures. The 668 S. Alameda Street Project is a mixed-use development consisting of 475 live/work units and ground-floor commercial space in the Arts District of Downtown. The project involved three levels of below grade parking. The EIR found the following potential impacts to archaeological resources:

  No prehistoric or historic archaeological resources have been recorded within the Project Site; however, three historic period archaeological resources have been encountered within a half-mile radius. One of these

resources (19-004460) is described as 25 historic period refuse deposits (dating from 1880 to 1923) and two structure features (foundation walls and railroad track segments) that were uncovered during archaeological construction monitoring services of the Los Angeles Department of Water and Power La Kretz Innovation Project in the Arts District. These features were identified just below modern asphalt surfaces and below the footprint of a large warehouse that was demolished, between one to three feet below the ground surface. Given the age and location of many of the features and artifacts, they appear to be associated with the former residential uses of that particular parcel as shown on early Sanborn Maps. A branch of the zanja water system (Zanja No. 2) once followed a north-south trend along South Alameda Street and immediately adjacent to the Project Site. Two other branches (Zanja 1 and 3) were also located in the general vicinity of the Project Site.

As discussed earlier, the Project Site was developed with former commercial and industrial uses by at least 1906 as shown on the Sanborn Maps. These uses included a gas station, auto service repair shop, chemical solution warehouse, meat packing warehouse, mattress manufacturing company, metal fabricating company, cordage rope and twine company, Metropolitan Hotel Supply Company, and a railroad spur. The latter building is the only one that appears to have had a basement. These improvements were later demolished for the construction of the current Showa Marine & Cold Storage warehouse building on the Project Site between 1984 and 2001. Since the current warehouse building does not have a basement, there is potential that remnants of the former uses have been preserved below the foundations of the warehouse and below the surface parking lot within the Project Site. Moreover, the Project Site is located in the vicinity of several historical-period thoroughfares and transportation corridors, including the Atchison, Topeka, and Santa Fe railroad and the Le Grand Railroad Station (in use 1893-1933), as well as activity associated with the Los Angeles River. Lastly, the archaeological resources identified within the vicinity indicate that this area preserves traces of occupation and use from early in the development history of this portion of Los Angeles. Therefore, Project excavations have a high potential for encountering buried historic period archaeological resources. Mitigation Measures ARCH-1 through ARCH-3 are prescribed below to ensure that potentially significant impacts to archaeological resources are reduced to a less than significant level. (668 S. Alameda DEIR at 4.3.1-21 to 22.)

The EIR identified the following mitigation measures which were found to reduce impacts to less than significant level:

MM ARCH-1: Prior to the issuance of a demolition permit, the Applicant shall retain a qualified Archaeologist who meets the Secretary of the Interior's Professional Qualifications Standards (qualified Archaeologist) to oversee an archaeological monitor who shall be present during construction activities on the Project Site such as demolition, clearing/grubbing, grading, trenching, or any other construction excavation activity associated with the Project. The activities to be monitored shall also include off-site

improvements in the vicinity of the Project site, such as utility, sidewalk, or road improvements. The monitor shall have the authority to direct the pace of construction equipment in areas of high sensitivity. The frequency of monitoring shall be based on the rate of excavation and grading activities, the materials being excavated (younger sediments vs. older sediments), and the depth of excavation, and if found, the abundance and type of archaeological resources encountered. Full-time monitoring may be reduced to part-time inspections, or ceased entirely, if determined adequate by the qualified Archaeologist. Prior to commencement of excavation activities, an Archaeological Sensitivity Training shall be given for construction personnel. The training session, shall be carried out by the qualified Archaeologist, will focus on how to identify archaeological resources that may be encountered during earthmoving activities, and the procedures to be followed in such an event.

MM ARCH-2: In the event that historic (e.g., including, but not limited to, bottles, foundations, Zanja water system related infrastructure, refuse dumps/privies, railroads, etc.) or prehistoric (e.g., hearths, burials, stone tools, shell and faunal bone remains, etc.) archaeological resources are unearthed, ground-disturbing activities shall be halted or diverted away from the vicinity of the find so that the find can be evaluated. An appropriate buffer area shall be established by the qualified Archaeologist around the find where construction activities shall not be allowed to continue. Work shall be allowed to continue outside of the buffer area. All archaeological resources unearthed by Project construction activities shall be evaluated by the qualified Archaeologist. If a resource is determined by the qualified Archaeologist to constitute a "historical resource" pursuant to CEQA Guidelines Section 15064.5(a) or a "unique archaeological resource" pursuant to Public Resources Code Section 21083.2(g), the qualified Archaeologist shall coordinate with the Applicant and the Department of City Planning to develop a formal treatment plan that would serve to reduce impacts to the resources. The treatment plan established for the resources shall be in accordance with CEQA Guidelines Section 15064.5(f) for historical resources and Public Resources Code Sections 21083.2(b) for unique archaeological resources. Preservation in place (i.e., avoidance) is the preferred manner of treatment. If in coordination with the City it is determined that preservation in place is not feasible, appropriate treatment of resource shall be developed by the qualified Archaeologist in coordination with and subject to final approval by the Department of City Planning. Treatment may include implementation of archaeological data recovery excavations to remove the resource along with subsequent laboratory processing and analysis. Any archaeological material collected may be curated at a public, non-profit institution with a research interest in the materials, such as the Fowler Museum, if such an institution agrees to accept the material. If no institution accepts the archaeological material, they shall be donated to a local school or historical society in the area for educational purposes.

MM ARCH-3: Prior to the release of the grading bond, the qualified Archaeologist shall prepare a final report and appropriate California Department of Parks and Recreation Site Forms at the conclusion of archaeological monitoring. The report shall include a description of resources unearthed, if any, treatment of

the resources, results of the artifact processing, analysis, and research, and evaluation of the resources with respect to the California Register of Historical Resources and CEQA. The report and the Site Forms shall be submitted by the Project applicant to the City, the South Central Coastal Information Center, and representatives of other appropriate or concerned agencies to signify the satisfactory completion of the development and required mitigation measures. (668 S. Alameda DEIR at p. 4.3-24 to 26 and FEIR at 3-2 to 3-4.)

The Hollywood Center mixed use project, discussed above found the following potential impacts to archaeological resources:

Review of previous investigations in the vicinity of the Project Site, as well as review of the prehistoric context for the area, provides an understanding of the potential for encountering prehistoric and historic archaeological resources within the Project Site during Project construction. When completing analysis of subsurface archaeological site sensitivity, important factors to consider include elevation, soil conditions, proximity to water, proximity to raw materials, and ethnographic and historic information. It is also necessary to evaluate the historic land use and past development and disturbances on the Project Site in determining the possibility for the preservation of subsurface prehistoric archaeological materials.

There is potential for the Project Site to contain subsurface archaeological resources. The current development within the Project Site that would be subject to excavation primarily consists of surface parking lots. Archaeological deposits are frequently located beneath parking lots where construction activities would not have likely destroyed any potential subsurface remnant associated with the previous residential dwellings, if any such remnants do exist. Additionally, the geotechnical report prepared for the Project indicates that the Project Site is underlain by 1 to 8 feet of historic fill, which likely represents a historic disturbance layer.45 Such layers are unlikely to represent imported fill but instead may be the result of historic development and demolition, which could contain historic period archaeological resources. Furthermore, the area is located less than two miles from the natural course of the Los Angeles River near the intersection that joins the Cahuenga Pass with the Los Angeles basin and may have been a focus of prehistoric human habitation. Holocene age Younger Alluvium in the subsurface of the Project Site, beneath artificial fill, indicates that it may contain buried archaeological deposits. Though unlikely, as no previously known burial sites or cemeteries have been identified, the Project Site has the potential for the preservation of buried resources and therefore could also contain human remains buried prehistorically or outside of a formal cemetery. The excavation associated with Project buildings would extend to a maximum depth of approximately 64 feet below the existing ground surface and into both the historic fill layer, as well as the native soils beneath which have the potential to contain prehistoric and/or historic archaeological resources, which could qualify as historical resources or unique archaeological resources under CEQA.

As a result of the archival research and archaeological resources survey conducted for the Project, no archaeological resources have been identified within or immediately adjacent to the Project Site. However, this does not preclude the possibility that subsurface archaeological deposits underlie the Project Site. Such resources could qualify as historical resources under CEQA, and impacts to any such resources would constitute a significant impact on the environment.

The historic map and aerial photo review indicates that the Project vicinity, including the Project Site, is located in an area that has seen various phases of development—initially residential and subsequently commercial—since the early 1900s. Evidence of this past development in the form of subsurface historic period archaeological deposits, including privies, foundation remnants, and trash scatters, could be present. To the south of the Project Site is P-19-003545, a historic period archeological site that contains a foundation, structure pads, privies, a dump, and a trash scatter was previously recorded. A previous geotechnical study that was conducted for the Project Site, which indicated a layer of artificial fill beneath the Project Site containing bricks, also supports this assessment.

Therefore, the Project's or the Project with the East Site Hotel Option's grading and excavation may substantially disturb, damage, or degrade previously unknown archaeological resources. As a result, the Project or the Project with the East Site Hotel Option construction has the potential to cause a substantial adverse change in the significance of an archaeological resource pursuant to Section 15064.5, which may result in a potentially significant impact to archaeological resources. (Hollywood Center DEIR at p. IV.C-84 to 85.)

The EIR identified with the following mitigation measures, incorporation of which would reduce impacts to a less than significant level:

CUL-MM-3: Prior to issuance of a grading permit and prior to the start of any ground disturbing activity, the Applicant shall retain a qualified archaeologist who meets the Secretary of the Interior's Professional Qualifications Standards (Qualified Archaeologist) to oversee an archaeological monitor who shall be present during construction excavations, such as demolition, clearing/grubbing, grading, trenching, or any other construction excavation activity associated with the Project, including peripheral activities, such as sidewalk replacement, utilities work, and landscaping, which may occur adjacent to the Project Site. The frequency of monitoring shall be based on the rate of excavation and grading activities, the materials being excavated (younger sediments vs. older sediments), the depth of excavation, and, if found, the abundance and type of archaeological resources encountered. Full-time monitoring may be reduced to part-time inspections, or ceased entirely, if determined adequate by the Qualified Archaeologist. Prior to commencement of excavation activities, Archaeological Sensitivity Training shall be given for construction personnel. The training session shall be carried out by the Qualified Archaeologist and shall focus on how to identify archaeological resources that may be encountered during earthmoving activities and the procedures to be followed in such an event.

CUL-MM-4: In the event that historic (e.g., bottles, foundations, refuse dumps/privies, railroads, etc.) or prehistoric (e.g., hearths, burials, stone tools, shell and faunal bone remains, etc.) archaeological resources are unearthed, ground-disturbing activities shall be halted or diverted away from the vicinity of the find so that the find can be evaluated. A 50-foot buffer within which construction activities shall not be allowed to continue shall be established by the Qualified Archaeologist around the find. Work shall be allowed to continue outside of the buffer area. All archaeological resources unearthed by Project construction activities shall be evaluated by the Qualified Archaeologist. If a resource is determined by the Qualified Archaeologist to constitute a "historical resource" pursuant to CEQA Guidelines Section 15064.5(a) or a "unique archaeological resource" pursuant to Public Resources Code Section 21083.2(g), the Qualified Archaeologist shall coordinate with the Applicant and the City to develop a formal treatment plan that would serve to reduce impacts to the resources. The treatment plan established for the resources shall be in accordance with CEQA Guidelines Section 15064.5(f) for historical resources and Public Resources Code Sections 21083.2(b) for unique archaeological resources. Preservation in place (i.e., avoidance) is the preferred manner of treatment. If, in coordination with the City, it is determined that preservation in place is not feasible, appropriate treatment of the resource shall be developed by the Qualified Archaeologist in coordination with the City and may include implementation of archaeological data recovery excavations to remove the resource along with subsequent laboratory processing and analysis. Any archaeological material collected shall be curated at a public, non-profit institution with a research interest in the materials, if such an institution agrees to accept the material. If no institution accepts the archaeological material, they shall be donated to a local school, Tribe, or historical society in the area for educational purposes.

CUL-MM-5: Prior to the release of the grading bond, the Qualified Archaeologist shall prepare final report and appropriate California Department of Parks and Recreation Site Forms at the conclusion of archaeological monitoring. The report shall include a description of resources unearthed, if any, treatment of the resources, results of the artifact processing, analysis, and research, and evaluation of the resources with respect to the California Register and CEQA. The report and the Site Forms shall be submitted by the Applicant to the City, the South Central Coastal Information Center, and representatives of other appropriate or concerned agencies to signify the satisfactory completion of the development and required mitigation measures.

- **Conversion and/or rehabilitation:** Existing nonresidential, residential and mixed-use structures could be converted or rehabilitated for new residential uses. The conversion or rehabilitation of existing properties would not involve new construction. Development projects of this type would be unlikely to cause ground disturbance and have little potential to impact an archaeological resource.

Most housing development associated with the build out of the RHNA would be unlikely to involve impacts to archaeological resources, due to expected residential development being located in infill areas where previous disturbance has occurred. Nonetheless, given the City's history, ground-disturbing activities have the potential to damage or destroy previously-unknown historic or prehistoric archaeological resources that may be present on or below the ground surface, particularly in areas that have not been studied through a cultural resources investigation, where excavation depths would exceed those previously attained, where water sources are present, and areas around mountains where resources would have been abundant. Therefore, given the number of housing units that may be accommodated under the Housing Element Update, damage to or destruction of, previously-unknown sub-surface cultural resources could occur as a result of future development that involves disturbance within native soils. Impacts would be ***potentially significant***.

Mitigation Measure

The following mitigation measures, in addition to Mitigation Measures 4.15-1(a) and 4.15-1(b) in Section 4.15, *Tribal Cultural Resources*, apply to discretionary housing development projects.

4.4-2 Archaeological Resources

In accordance with the *CEQA Guidelines*, development projects under the Housing Element Update that may result in impacts to archaeological resources, consisting of those that may involve ground disturbance in native soils or soils of unknown origin, shall implement the following procedures to identify archaeological resources located in a development site and implement applicable impact reduction techniques to reduce substantial adverse effects associated with the inadvertent discovery of archaeological resources.

A. At the time of application for discretionary land use permits or subdivisions that involve disturbances within previously undisturbed native soils, the project applicant shall retain a qualified archaeologist meeting the Secretary of the Interior's Professional Qualifications Standards (PQS) in archaeology to complete a cultural resources assessment of the development site. A cultural resources assessment may include an archaeological pedestrian survey of the development site, if possible, and sufficient background archival research and field sampling to determine whether subsurface prehistoric or historic remains may be present. Archival research should include a records search conducted at the South Central Coastal Information Center (SCCIC) and a Sacred Lands File (SLF) search conducted with the Native American Heritage Commission (NAHC).
B. If prehistoric or historic archaeological remains are identified as a result of the SCCIC or SLF searches, the remains shall be avoided and preserved in place where feasible.

C. Where preservation is not feasible, each resource shall be evaluated for significance and eligibility to the California Register. Phase 2 evaluation shall include any necessary archival research to identify significant historical associations as well as mapping of surface artifacts, collection of functionally or temporally diagnostic tools and debris, and excavation of a sample of the cultural deposit to characterize the nature of the sites, define the artifact and feature contents, determine horizontal boundaries and depth below surface, and retrieve representative samples of artifacts and other remains.

D. Excavation at Native American sites shall be monitored by a geographically affiliated tribal representative, as agreed upon in any formal consultation proceedings with the geographically affiliated tribe or as indicated by the NAHC.

E. Cultural materials collected from the sites shall be processed and analyzed in the laboratory according to standard archaeological procedures. The age of the remains shall be determined using radiocarbon dating and other appropriate procedures; lithic artifacts, faunal remains, and other cultural materials shall be identified and analyzed according to current professional standards.

F. Following laboratory analysis, the significance of the sites shall be evaluated according to the criteria of the California Register. The results of the investigations shall be presented in a technical report following the standards of the California Office of Historic Preservation (OHP) publication "Archaeological Resource Management Reports: Recommended Content and Format (1990 or latest edition)" (http://ohp.parks.ca.gov/pages/1054/files/armr.pdf).

G. Upon completion of the work, all artifacts, other cultural remains, records, photographs, and other documentation shall be curated an appropriate curation facility. All fieldwork, analysis, report production, and curation shall be fully funded by the applicant.

H. If the resources meet California Register significance standards, the City shall ensure that all feasible recommendations for impact reduction of archaeological impacts are incorporated into the final design and permits issued for development. Necessary Phase 3 data recovery excavation, conducted to exhaust the data potential of significant archaeological sites, shall be carried out by a qualified archaeologist meeting the Secretary of the Interior's PQS for archaeology according to a research design reviewed and approved by the City prepared in advance of fieldwork and using appropriate archaeological field and laboratory methods consistent with the OHP Planning Bulletin 5 (1991), Guidelines for Archaeological Research Design, or the latest edition thereof.

I. As applicable, the final Phase 1 Inventory, Phase 2 Testing and Evaluation, or Phase 3 Data Recovery reports shall be submitted to the City prior to issuance of construction permit. Recommendations contained therein shall be implemented throughout all ground disturbance activities.

J. If recommended by a cultural resources assessment, prior to issuance of a grading permit and prior to the start of any ground-disturbing activity, the applicant shall retain a qualified archaeologist who meets the Secretary of the Interior's PQS to oversee an archaeological monitor who shall be present during construction excavations, such as demolition, clearing/grubbing, grading, trenching, or any other construction excavation activity associated with the project, including peripheral activities, such as sidewalk replacement, utilities work, and landscaping, which may

occur adjacent to the project site. The frequency of monitoring shall be based on the rate of excavation and grading activities, the materials being excavated (younger sediments vs. older sediments), the depth of excavation, and, if found, the abundance and type of archaeological resources encountered. Full-time monitoring may be reduced to part-time inspections, or ceased entirely, if determined adequate by the qualified archaeologist. Prior to commencement of excavation activities, Archaeological Sensitivity Training shall be given for construction personnel. The training session shall be carried out by the qualified archaeologist and shall focus on how to identify archaeological resources that may be encountered during earthmoving activities and the procedures to be followed in such an event.

K. In the event that historic (e.g., bottles, foundations, refuse dumps/privies, railroads, etc.) or prehistoric (e.g., hearths, burials, stone tools, shell and faunal bone remains, etc.) archaeological resources are unearthed, ground-disturbing activities shall be halted or diverted away from the vicinity of the find so that the find can be evaluated. A 50-foot buffer within which construction activities shall not be allowed to continue shall be established by the qualified archaeologist around the find. Work shall be allowed to continue outside of the buffer area. All archaeological resources unearthed by project development activities shall be evaluated by the qualified archaeologist. If a resource is determined by the qualified archaeologist to constitute a "historical resource" pursuant to CEQA Guidelines Section 15064.5(a) or a "unique archaeological resource" pursuant to Public Resources Code Section 21083.2(g), the qualified archaeologist shall coordinate with the applicant and the City to develop a formal treatment plan that would serve to reduce impacts to the resources. The treatment plan established for the resources shall be in accordance with CEQA Guidelines Section 15064.5(f) for historical resources and Public Resources Code Sections 21083.2(b) for unique archaeological resources. Preservation in place (i.e., avoidance) is the preferred manner of treatment. If, in coordination with the City, it is determined that preservation in place is not feasible, appropriate treatment of the resource shall be developed by the qualified archaeologist in coordination with the City and may include implementation of archaeological data recovery excavations to remove the resource along with subsequent laboratory processing and analysis. Any archaeological material collected shall be curated at a public, non-profit institution with a research interest in the materials, if such an institution agrees to accept the material. If no institution accepts the archaeological material, they shall be donated to a local school, Tribe, or historical society in the area for educational purposes.

Significance After Mitigation

Implementation of Mitigation Measures 4.4-2, 4.15-1(a), and 4.15-1(b) would avoid significant direct impacts to archaeological resources to the maximum extent feasible and provide for recovery of any significant resources that cannot be preserved in place. However, the City finds application of the mitigation measures to ministerial projects to be infeasible. Additionally, some discretionary housing projects associated with build out of the RHNA could result in a finding that the implementation of Mitigation Measures 4.4-2, 4.15-1(a), and 4.15-1(b) are infeasible for the respective housing project, resulting in potentially significant impacts to archaeological resources. Additionally, even with application of the mitigation measures it is possible based on conditions unknown at this time, significant impacts may still result. Based on these possibilities, impacts to archaeological resources remain ***significant and unavoidable***.

4.4.4 CUMULATIVE IMPACTS

The geographic area to analyze cumulatively considerable cultural resource impacts includes the entire City of Los Angeles.

Historical Resources

Cumulative development throughout Los Angeles could involve demolition or alteration of historical resources. The nature and magnitude of such impacts would depend on the nature and location of individual future developments so it would be speculative to try to predict the specific level of cumulative impact that may occur as the City continues to develop. Nevertheless, it is conservatively projected that citywide development could result in the alteration or loss of some historical resources, with potentially significant cumulative impacts.

As discussed under Impact 4.4-1, development under the Housing Element Update could involve demolition or alteration of historical resources throughout Los Angeles. Because the nature and magnitude of such impacts would depend on the nature and location of individual future developments, it would be speculative to predict the specific level of cumulative impact that may occur as a result of implementation of the Housing Element Update. Nevertheless, it is conservatively projected that development under the Housing Element Update could result in the alteration or loss of some historical resources, with potentially significant impacts. Further, as discussed above, the City may prioritize development sites identified as High Resource and Very High Resource Areas. Some of these areas include portions of CPAs known to have relatively high concentrations of previously identified historical resources. As a result, development in construction in these areas may be more likely to cause impacts to historical resources. Based on this

information, the Housing Element Update could foreseeably have a cumulatively considerable contribution to a significant cumulative impact to historical resources.

The potential for impacts to historical resources from individual developments is site-specific and depends on the location and nature of each individual development proposal. All future development projects would continue to be subject to existing federal, State, and local requirements and discretionary projects may be subject to project-specific mitigation requirements as outlined herein. It is anticipated that cumulative impacts to historical resources can be avoided or minimized through implementation of RCM-CR-1, mitigation measures, and project design features on a project-by-project basis, but alteration or demolition of historical resources remains a possibility citywide.

Based on the above, the incremental effect of the Housing Element Update on historical resources would be cumulatively considerable and cumulative impacts to historical resources citywide would be ***significant and unavoidable***.

Archaeological Resources

Under the Housing Element Update, cumulative development throughout Los Angeles could potentially disturb known and currently unknown archaeological resources that could be present throughout the City. The nature and magnitude of such impacts would depend on the nature and location of individual future developments so it would be speculative to try to predict the specific level of cumulative impact that may occur as the City continues to develop. Nevertheless, it is anticipated that citywide development would have the potential to disturb archaeological resources. Potentially significant cumulative archaeological resource impacts could, however, be mitigated to below a level of significance through resource avoidance or recovery on a case-by-case basis.

As discussed under Impact 4.4-2, the Housing Element Update could potentially disturb archaeological resources that may be present citywide. Although it is anticipated that cumulative impacts to archaeological resources can be avoided or minimized through implementation of mitigation measures on a project-by-project basis, impacts to remain a possibility citywide. Based on the above, the incremental effect of the Housing Element Update on archaeological resources would be cumulatively considerable and cumulative impacts to archaeological resources citywide would be ***significant and unavoidable***.

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4.5 GEOLOGY AND SOILS

This section describes the potential for projects under the Housing Element Update to directly or indirectly destroy a unique paleontological resource or site or unique geologic feature. This section provides contextual information on paleontological resources and analyzes potential impacts that future project-related ground-disturbing activities associated with implementation of the Housing Element Update may have on those resources. As discussed in the Initial Study to this EIR, all impacts associated with Geology and Soils were scoped out of the EIR with the exception of impacts related to paleontological resources and unique geologic features (see Appendix A). In addition, all impacts from the Safety Element associated with geologic conditions and soils were found to be less than significant in the Initial Study.

4.5.1 ENVIRONMENTAL SETTING

Paleontological Resources

Paleontological resources, or fossils, are the evidence of once-living organisms preserved in the rock record. They include both the fossilized remains of ancient plants and animals and the traces thereof (e.g., trackways, imprints, burrows, etc.). Paleontological resources are not found in "soil" but are contained within the geologic deposits or bedrock that underlies the soil layer. Typically, fossils are greater than 5,000 years old (i.e., older than middle Holocene in age) and are typically preserved in sedimentary rocks. Although rare, fossils can also be preserved in volcanic rocks and low-grade metamorphic rocks under certain conditions (Society of Vertebrate Paleontology [SVP] 2010). Fossils occur in a non-continuous and often unpredictable distribution within some sedimentary units, and the potential for fossils to occur within sedimentary units depends on a number of factors. Although it is not possible to determine whether a fossil will occur in any specific location, it is possible to evaluate the potential for geologic units to contain scientifically significant paleontological resources, and therefore evaluate the potential for impacts to those resources and provide mitigation for paleontological resources if they are discovered during construction of a development project.

Regional Geology

The City of Los Angeles is situated in the Peninsular Ranges and Transverse Ranges geomorphic provinces, which are two of the eleven major geomorphic provinces in California (California Geological Survey [CGS] 2002). A geomorphic province is a region of unique topography and geology that is readily distinguished from other regions based on its landforms and diastrophic history (Norris and Webb 1990). Each geomorphic province has its own unique geologic history, lithology, and potential to yield paleontological resources.

Transverse Ranges: San Fernando Valley and Santa Monica Mountains

The northern portion of the City is located in the San Fernando Valley within the Transverse Ranges Geomorphic Province, which is a west-east-trending range extending approximately 275 miles from Point Arguello in Santa Barbara County, east to the San Bernardino Mountains, and south to the Anacapa-Santa Monica Hollywood-Raymond-Cucamonga Thrust Fault Zone (Yerkes and Campbell 2005). The geology of the Transverse Ranges generally consists of Proterozoic to Mesozoic intrusive igneous and metamorphic rocks and Cenozoic volcanic, marine, and terrestrial sedimentary deposits, with west-east-trending reverse faults and northwest-trending strike-slip faults (Morton and Miller 2006). The highest peak in the Transverse Ranges is Mount San Gorgonio at 11,502 feet above mean sea level (Norris and Webb 1990). Tectonic uplift and erosion in the Transverse Ranges have produced the rugged terrain, numerous landslides, and extensive alluvial sedimentation in deep valleys, such as the Ventura Basin (Harden 1998; Morton and Miller 2006). The unique east-west orientation of the Transverse Ranges relative to other ranges in California is due to crustal compression along the San Andreas Fault and lateral motion along the Pacific Plate (Yerkes et al. 1965). The San Fernando Valley is a lowland alluvial plain that encompasses the area north of the Santa Monica Mountains, west of the San Gabriel Mountains, and south of the Santa Susana Mountains (Yerkes et al. 1965). The San Fernando Valley is underlain by a structural depression that contains a thick accumulation of more than 20,000 feet of Cenozoic alluvial, shallow marine, and deep shelf sedimentary deposits (McCulloh and Beyer 2004). The San Fernando Valley is structurally complex and is transected by several faults, including the San Fernando fault, Sylmar fault zone, Mission Hills fault, and Verdugo fault.

Peninsular Ranges: Los Angeles Basin

The southern portion of the City is located in the Los Angeles Basin within the Peninsular Ranges Geomorphic Province, which is a northwest-southeast oriented series of structural blocks that extends 125 miles from the Los Angeles Basin to the tip of Baja California (Norris and Webb 1990). As shown in Figure 4.5-1, the Peninsular Ranges are bound on the east by the Elsinore Fault Zone and the Colorado Desert and on the west by the Pacific Coast (Morton and Miller 2006; Norris and Webb 1990). The geology of the ranges generally consists of Paleozoic metamorphic rocks; Mesozoic granitic rocks of the southern California batholith; and Cenozoic marine, terrestrial, and Quaternary alluvial deposits. The highest point within the province is San Jacinto Peak, which reaches 10,805 feet above sea level (Norris and Webb 1990). Physiographically, the onshore part of Peninsular Ranges Geomorphic Province is divided into three major, fault-bounded blocks that are, west to east, the Santa Ana, Perris, and San Jacinto mountain blocks. Late Cretaceous and Cenozoic sedimentary rocks ranging in age from Late Cretaceous through Holocene are exposed throughout most of the western part of the Santa Ana block (Morton and Miller 2006). North of the Santa Ana block, the low-lying Puente Hills expose folded and faulted Neogene marine sedimentary

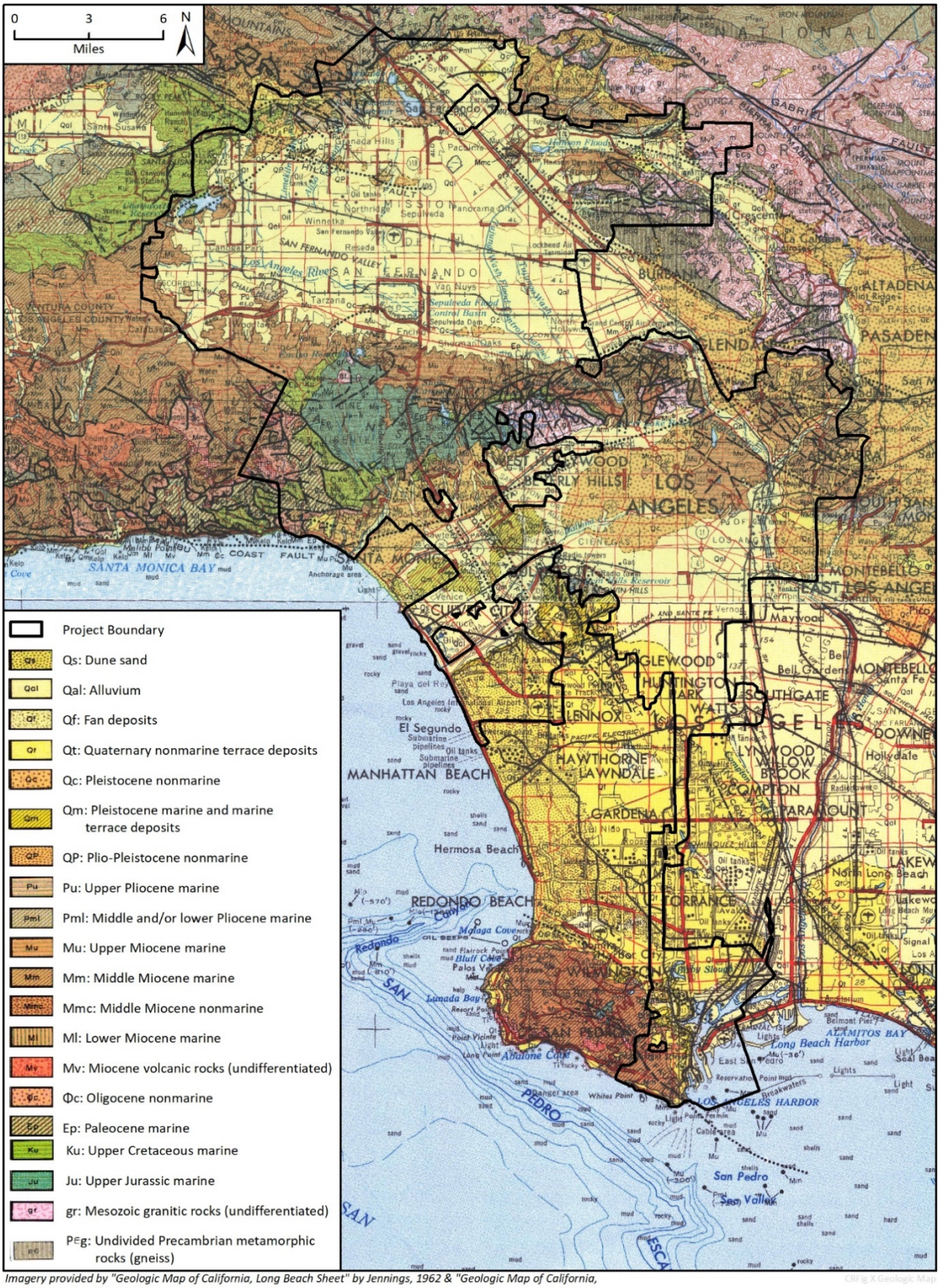
rocks of the Los Angeles Basin (Yerkes et al. 1965), a northwest-trending sedimentary basin in the northern-most portion of the Peninsular Ranges of southern California (Yerkes and Campbell 2005).

The Los Angeles Basin is coastal plain bounded to the north by the Santa Monica Mountains and the Elysian, Repetto, and Puente Hills and bounded to the east by the Santa Ana Mountains (Norris and Webb 1990). It is bounded to the southeast by the San Joaquin Hills and the southwest by the Palos Verdes Hills, the most prominent feature in the basin reaching 1,300 feet in elevation. The basin is about 50 miles long and 20 miles wide and is mostly covered by alluvial fan deposits derived from the surrounding higher elevations as well as fluvial deposits of the ancestral Los Angeles River. Locally, the basin contains more than 32,000 feet of strata ranging from Miocene to Recent in age. Structurally, the basin can be divided into four primary structural blocks: the northwest, southwest, central, and northeastern blocks. Each of these informal basin subdivisions are separated by major zones of faulting or flexure in the basement rocks, resulting in contrasting stratigraphy. The Los Angeles Basin has undergone many major evolutionary phases, resulting in five distinctive rock assemblages. These assemblages reflect a pre-depositional basement rock formation phase, a pre-basin phase during which Upper Cretaceous to Lower Miocene rocks were deposited, a basin-inception phase during which time Middle Miocene rocks were deposited, a subsidence and depositional phase during which Upper Miocene to Lower Pleistocene rocks were deposited, and finally, a disruption phase. During the disruption phase, as many as 13 successive marine platforms have been cut into the Pleistocene strata resulting in deformed and locally overturned deposits (Yerkes et al. 1965).

Local Geologic Setting

The City includes 19 mapped geologic units (Jennings 1962; Jennings and Strand 1969) inclusive of the following: 1) Quaternary young (middle to late Holocene) aeolian deposits (Qs); 2) Quaternary young (middle to late Holocene) alluvial fan deposits (Qf); 3) Quaternary young (middle to late Holocene) alluvium; 4) Quaternary old (late Pleistocene to middle Holocene) nonmarine terrace deposits (Qt); 5) Quaternary old (Pleistocene) nonmarine sedimentary deposits (Qc); 6) Pleistocene San Pedro Formation (Qm); 7) Pliocene to Pleistocene Saugus Formation (QP); 8) Pliocene Fernando Formation (Pu, Pml); 9) upper Miocene marine sedimentary rocks (Mu); 10) middle Miocene marine sedimentary rocks (Mm); 11) middle Miocene nonmarine sedimentary rocks (Mmc); 12) lower Miocene marine sedimentary rocks (Ml); 13) undifferentiated Miocene volcanic rocks (Mv); 14) Oligocene nonmarine sedimentary rocks (Φc); 15) Paleocene marine sedimentary rocks (Ep); 16) Upper Cretaceous marine sedimentary rocks (Ku); 17) Jurassic Santa Monica Slate (Ju); 18) undifferentiated Mesozoic granitic rocks (gr); 19) undivided Precambrian metamorphic rocks (P∈g). Refer to Figure 4.5-1 for the geologic units mapped in the City. The sensitivities of common geologic units to paleontological resources in the City is summarized below the figure, in Table 4.5-1, and also shown in Figure 4.5-2.

Figure 4.5-1 Geologic Units within the Project Area



Imagery provided by "Geologic Map of California, Long Beach Sheet" by Jennings, 1962 & "Geologic Map of California, Los Angeles Sheet" by Jennings and Rudolph, 1969.

Figure 4.5-2 Paleontological Sensitivy within the Project Area

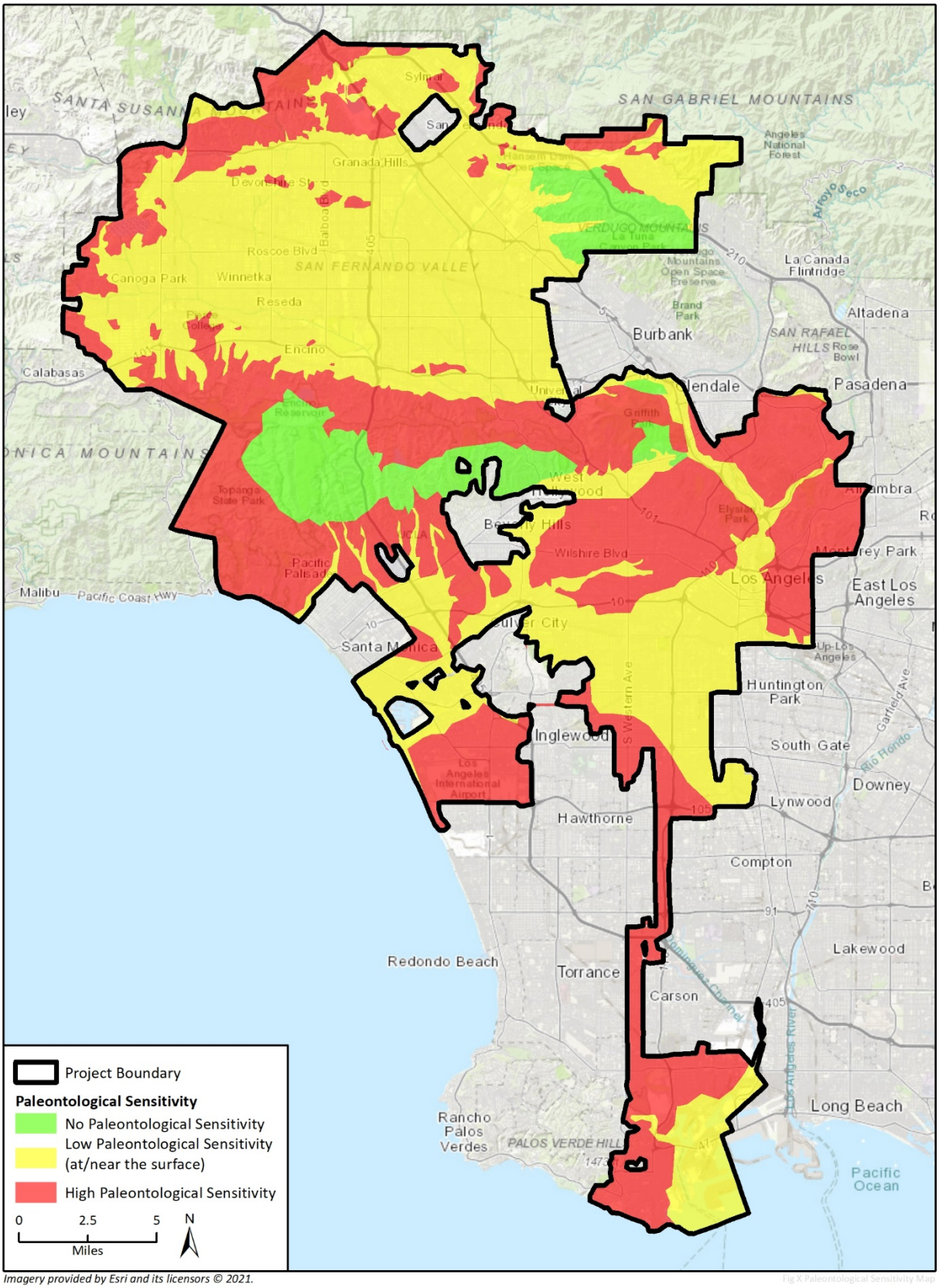


Table 4.5-1 Paleontological Sensitivity of Geologic Units in the Project Area

Geologic Units Identified on Figure 4.5-1	Sensitivity & Characteristics
Granitic, basalt, and metamorphic units: Miocene volcanic rocks (Mv); Jurassic Santa Monica Slate (Ju); Mesozoic granitic rocks (gr); Precambrian metamorphic rocks (P∈g)	No sensitivity. Physical parameters of formation are not conducive to fossil preservation.
Miocene volcanic rocks (Mv); Interbedded volcanic sandstone of volcanic sequences	Volcanic sandstone beds within volcanic sequences is a rare.
Quaternary old (Pleistocene) sedimentary deposits (Qc, Qt); Pleistocene San Pedro Formation (Qm); Pliocene to Pleistocene Saugus Formation (QP); Pliocene Fernando Formation (Pml, Pu); upper Miocene Marine sedimentary deposits (Mu); middle Miocene marine and nonmarine sedimentary rocks (Mm, Mmc)	High Sensitivity. Formations have the potential to contain buried intact paleontological resources because these units have proven to yield scientifically significant vertebrate fossils in Los Angeles County and throughout California.
Lower Miocene marine sedimentary deposits (Ml); Oligocene nonmarine sedimentary rocks (Φc); Paleocene marine sedimentary deposits (Ep); Upper Cretaceous marine sedimentary deposits (Ku)	High Sensitivity. The mapping of Jennings and Strand (1969) lumps various geologic formations within the broader geologic categories of mapped at the scale of 1:250,000.
Middle to late Holocene sedimentary deposits; Quaternary young (middle to late Holocene) sedimentary deposits (Qs, Qal, Qf)	Low Sensitivity at surface; these units grade downward into older, potentially fossiliferous deposits of early Holocene to Pleistocene age (e.g., Qc, Qt) at unknown depths, that can only be estimated, based on regional geologic setting in the absence of additional data.
Early Holocene to Pleistocene sedimentary deposits (includes Quaternary young [middle to late Holocene] sedimentary deposits [Qs, Qal, Qf] at unknown depths)	High Sensitivity. Formations have a well-documented record of abundant and diverse vertebrate fauna throughout California.
Sources: Jefferson 2010; Paleobiology Database 2020; UCMP 2020	

The general lithology of the geologic units present in the City, as identified in the figures and table above, is discussed below.

Quaternary Young Sedimentary Deposits (Qs, Qal, Qf)

Quaternary young (middle to late Holocene) aeolian (Qs) and alluvial (Qal, Qf) deposits and are mapped extensively at ground surface throughout the City in the Los Angeles Basin and the San Fernando Valley (Jennings 1962; Jennings and Strand 1969). Quaternary young aeolian deposits are composed of moderately to well-sorted, fine-to medium-grained windblown sand and silt. Surficial alluvial deposits consist of slightly to poorly consolidated and poorly sorted floodplain deposits composed of clay, silt, sand, and silty sand. Locally, these deposits may be overlain by a slightly to moderately developed soil profile (Saucedo et al. 2016). Middle to late Holocene sedimentary deposits at the surface are too young to preserve fossil resources but at unknown depths, sediments may transition from too young to support fossils, to early Holocene or late Pleistocene in age in which unique paleontological resources could occur. Existing stratigraphic data (DWR 1961) discusses the general range of geologic unit thicknesses in various regions

of the Los Angeles Basin; however, specific information on the depth at which middle to late Holocene units mapped at the surface become old enough to support paleontological resources is not available.

Quaternary Old Sedimentary Deposits (Qc, Qt)

Quaternary old (Pleistocene) alluvial (Qc) and nonmarine terrace (Qt) deposits are mapped extensively at ground surface throughout the City within the Los Angeles Basin and San Fernando Valley (Jennings 1962; Jennings and Strand 1969). Pleistocene alluvial and nonmarine sediments are composed of weakly consolidated, dissected alluvial sand, clay, silt, and gravel interbedded with fanglomerate deposits. Quaternary old sedimentary deposits (e.g., Qc, Qt) have a well-documented record of abundant and diverse vertebrate fauna throughout California, especially within the Los Angeles Basin. Fossil specimens of whale, sea lion, horse, ground sloth, bison, camel, mammoth, dog, pocket gopher, turtle, ray, bony fish, shark, and bird have been reported (Agenbroad 2003; Jefferson 2010; Merriam 1911; Paleobiology Database 2020; Savage et al. 1954; Tomiya et al. 2011; Winters 1954; University of California Museum of Paleontology [UCMP] 2020).

Pleistocene Marine and Marine Terrace Deposits/San Pedro Formation (Qm)

The Pleistocene San Pedro Formation (Qm) is mapped in the southernmost portion of the Los Angeles Basin (Jennings 1962). The Pleistocene San Pedro Formation consists of cross-bedded fine- to medium-grained sand, with subordinate subrounded fine to coarse pebbles, unconsolidated carbonate gravel and marl, and silt (Jennings and Strand 1969; Woodring et al. 1946). The San Pedro Formation has yielded an abundant and diverse marine fauna in Los Angeles County. Several invertebrate localities have been recorded within the San Pedro Formation, which yielded several hundred different taxa of gastropods, pelecypods, scaphopods, arthropods, bryozoans, crustaceans, echinoids, and foraminifera (DeBusk and Corsetti 2011; Jacobs 2005; Powell and Stevens 2000). Marine vertebrates have also been recovered from the San Pedro Formation, including whale, bony fish, rays, and sharks. In addition, terrestrial vertebrates including horse, bison, camel, saber-toothed tiger, ground sloth, elephant, rodent, turtle, and numerous specimens of birds have been discovered in the San Pedro Formation (Paleobiology Database 2020; UCMP 2020; Woodring et al. 1946).

Pliocene to Pleistocene Nonmarine Deposits/Saugus Formation (QP)

The Pliocene to Pleistocene Saugus Formation (QP) is mapped in the northern portion of the City, in the San Fernando Valley (Jennings and Strand 1969). The nonmarine to marine deposit is composed of tan to reddish-tan to gray- buff moderately indurated pebble conglomerate, sandstone, and claystone. The total thickness of the unit is unknown, but oil well data indicates that it may be as much as 12,000 feet thick (Winterer and Durham 1962). The Saugus Formation was first described from exposures in Soledad Canyon near the town of Saugus and is comprised of interfingering marine, brackish water, and

nonmarine deposits that grade upward into nonmarine fluvial and alluvial deposits. The lithology of the Saugus Formation includes pebble conglomerates with clasts up to boulder size, interstratified with poorly sorted, medium- to coarse-grained, moderately lithified, arkosic sandstones of a light grey to buff color, and gray-green siltstone (Beyer 1995; Yerkes and Campbell 2005). Pliocene to Pleistocene Saugus Formation has yielded abundant invertebrate fossils, including bivalves, gastropods, scaphopods, barnacles, crabs, sponges, bryozoans, brachiopods, and echinoids (Groves 1991; Winterer and Durham 1962). The Saugus Formation has also yielded terrestrial vertebrate fossil specimens, primarily from its upper unit. At least three vertebrate localities have been recovered in northern Los Angeles County, which yielded specimens of horse, dog, alligator lizard, and pocket gopher (Winterer and Durham 1962).

Lower to Upper Pliocene Marine Deposits/Fernando Formation (Pml, Pu)

Two members of the Fernando Formation (Pml, Pu), ranging from early to late Pliocene in age, are mapped in the northern and central portions of the City in the Los Angeles Basin and San Fernando Valley (Jennings and Strand 1969). The Pliocene age unit is as much as 1,825 meters thick in the Puente Hills area and was deposited in a deep marine environment (Morton and Miller 2006). Locally, the Fernando Formation consists of a gray, vaguely-bedded marine claystone with interbeds of siltstone and shale. The Pliocene Fernando Formation has yielded various vertebrate, invertebrate, and microfossil specimens throughout southern California, including specimens of bird, tapir, camel, whale, mollusk, and foraminifera in Los Angeles County (Beyer 1995; Paleobiology Database 2020; UCMP 2020).

Upper Miocene Marine Sedimentary Deposits (Mu)

Upper Miocene marine sedimentary deposits (Mu) includes two fossiliferous geologic formations, known as the Puente Formation and Modelo Formation. The Puente Formation is mapped within the central portion of the City in the Los Angeles Basin. Locally, this unit consists of gray to light brown, thinly bedded siliceous shale, siltstone, sandstone, and conglomerate (Jennings and Strand 1969). The Puente Formation was named after the exposures in the Puente Hills, where the unit reaches a maximum thickness of 4,000 meters (Jennings and Strand 1969; Yerkes and Campbell 2005). Numerous vertebrate localities have been documented from within the Puente Formation yielding specimens of marine and terrestrial fauna including whale, shark, bony fish, mastodon, rhinoceros, horse, rabbit, and rodent (Paleobiology Database 2020). In addition, several invertebrate, plant, and microfossil localities have been discovered within the Puente Formation and include specimens of insect, mollusk, sponge, algae, and foraminifera (UCMP 2020).

The Modelo Formation is mapped in the northern portion of the City in the Santa Monica Mountains (Jennings and Strand 1969; UCMP 2020). The unit is dominated by finely laminated fine-grained diatomaceous and siliceous mudrocks, limestone and dolomite, calcareous and phosphatic mudrocks, chert and porcellanite, with subordinate tuff, sandstone, and conglomerate (Bramlette 1946; MacKinnon

1989). The Miocene Modelo Formation is a well-documented fossiliferous geologic unit in southern California, especially in Los Angeles County. Numerous vertebrate localities have been documented from within the Modelo Formation, which yielded specimens of large sea turtles, whale, dolphins, sea lions, shark bones and teeth, sea cows, fish, birds, and other marine fauna (Bramlette 1946; Harden 1998; Koch et al. 2004; Paleobiology database 2020; Woodring et al. 1946). In many localities, the Modelo Formation has produced remarkably well-preserved fossil specimens of whale, dolphin, shark, and fish (Koch et al. 2004).

Middle Miocene Marine and Nonmarine Sedimentary Rocks (Mm, Mmc)

Middle Miocene marine (Mm) and nonmarine (Mmc) sedimentary deposits includes two fossiliferous geologic formations, known as the Topanga Formation and Monterey Formation. Two members of the middle Miocene Topanga Formation (Mm, Mmc) are mapped in the northern portion of the City in the Santa Monica Mountains (Jennings and Strand 1969). The upper member of the middle Miocene Topanga Formation (Mm) consists of reddish brown to orange marine sedimentary deposits, including fine-grained beach sandstone, shelf sandstone, and siltstone (Jennings and Strand 1969). In contrast, the lower member of the Middle Miocene Topanga Formation (Mmc) is composed of nonmarine sedimentary deposits, including shale, sandstone, conglomerate, and arkose (Jennings and Strand 1969). Several vertebrate fossils have been reported from the Topanga Formation, including specimens of horse (*Parapliohippus carrizoensis*), whale, sea lion, shark, and fish (Koch et al. 2004; Paleobiology Database 2020; UCMP 2020).

Middle Miocene Monterey Formation is mapped in the southernmost portion of the City in the Los Angeles Basin (Jennings 1962). The Monterey Formation is extensive and outcrops along coastal California from north of San Francisco to south of Los Angeles (Norris and Webb 1990). Locally, the Monterey Formation consists of white-weathering, thinly bedded and platy siliceous shale and tan to light gray, semi-friable arkosic sandstone. The Monterey Formation is well known for producing marine vertebrates, plants, invertebrates, and microfossils from more than 1200 localities in California. Museum collections document dozens of vertebrate localities yielding large sea turtles, dolphins, whales, pinnipeds, sharks, fish, desmostylians, birds, and many other fauna (Behl 1999: Paleobiology Database 2020; UCMP 2020). Typically, the fossil specimens within the Monterey Formation have been recovered from its diatomite and shale deposits, but the limestone and sandstone beds have also yielded abundant remains (Behl 1999).

Lower Miocene Marine Sedimentary Deposits (Ml)

Lower Miocene marine sedimentary deposits (Ml), consisting of brown to white sandstone, gray claystone, and siltstone, are mapped in the northern portion of the City. (Jennings and Strand 1969). A review of the museum records maintained in the UCMP and Paleobiology online collections databases did not result in

records of vertebrate fossil localities from lower Miocene marine sedimentary deposits in Los Angeles County (Paleobiology Database 2020; UCMP 2020). However, the lithology and age of these sediments indicate that this rock unit may be included with other fossiliferous marine sedimentary deposits of Miocene age, such as the geologic formations discussed above (Jennings and Strand 1969; Yerkes and Campbell 2005).

Miocene Volcanic Rocks (Mv)

Miocene volcanic rocks (Mv), consisting of basalt flows, tuffs, flows and breccias interbedded with fine-grained, massive, volcanic sandstone, are mapped in the northern portion of the Proposed Project within the Santa Monica Mountains (Jennings and Strand 1969). Basaltic volcanic rocks were formed as a result of cooling molten rock (i.e., lava flows) at the surface.

Oligocene Nonmarine Sedimentary Rocks (Φc)

Oligocene nonmarine sedimentary rocks (Φc) are mapped in the northern portion of the City in the Santa Monica Mountains and other mountainous areas surrounding the San Fernando Valley. Locally, these deposits consist of greenish gray to red conglomerate sandstone and mudstone (Jennings and Strand 1969). A review of the museum records maintained in the UCMP and Paleobiology online collections databases did not result in records of vertebrate fossil localities from Oligocene nonmarine sedimentary deposits in Los Angeles County (Paleobiology Database 2020; UCMP 2020). However, according to Jennings and Strand, these marine deposits are similar in age and lithology to the Sespe Formation, which is extensively exposed throughout within Santa Barbara and Orange counties (1969). The Sespe Formation has been divided into three members: a conglomeritic lower member; an interbedded sandstone and claystone middle member, which contains vertebrate fossils; and a thick upper member composed of sandstone, claystone, and conglomerate (Dibblee and Ehrenspeck 1987). The Sespe Formation has yielded hundreds of various fossil specimens of mammalian, rodent, reptile, and bird species (Paleobiology Database 2020; UCMP 2020).

Paleocene Marine Sedimentary Deposits (Ep)

Paleocene marine sedimentary deposits (Ep), consisting of sandstone interbedded with thin shale and conglomerate, are mapped in the northern portion of the City in the Santa Monica Mountains (Jennings and Strand 1969). A review of the museum records maintained in the UCMP and Paleobiology online collections databases did not result in records of vertebrate fossil localities from Paleocene marine sedimentary deposits in Los Angeles County (Paleobiology Database 2020; UCMP 2020). Although occurrence of vertebrate fossils has not been previously reported in peer-reviewed literature or museum records, the lithology and age of these Paleocene marine sedimentary deposits would indicate that this rock unit may be conducive for the preservation of paleontological resources (Jennings and Strand 1969).

Upper Cretaceous Marine Sedimentary Deposits (Ku)

Upper Cretaceous marine sedimentary deposits (Ku), consisting of light-gray sandstone, dark-gray siltstone and shale, and minor cobble conglomerate, are mapped in the northern portion of the City in the Santa Monica Mountains (Jennings and Strand 1969). A review of the museum records maintained in the UCMP and Paleobiology online collections databases did not result in records of vertebrate fossil localities from Upper Cretaceous marine sedimentary deposits in Los Angeles County (Paleobiology Database 2020; UCMP 2020). Although occurrence of vertebrate fossils has not been previously reported in peer-reviewed literature or museum records, the lithology and age of these Upper Cretaceous marine sedimentary deposits would indicate that this rock unit may be conducive for the preservation of paleontological resources (Jennings and Strand 1969).

Upper Jurassic Marine/Santa Monica Slate (Ju)

The Jurassic Santa Monica Slate (Ju), which consists of folded and jointed black slate, with metasiltstone, and fine-grained metagraywacke, is mapped in the northern portion of the City in the Santa Monica Mountains (Jennings and Strand 1969). The Santa Monica Slate includes an intrusion of a Cretaceous granitic pluton, which caused a zone of contact metamorphism and formed phyllite and spotted slate with large cordierite crystals. Rare bivalves (i.e., pelecypods) have been observed in the slate, but due to the high heat and pressure of metamorphism, most fossils, if present, would have likely been destroyed.

Mesozoic Granitic Rocks (gr)

Mesozoic granitic rocks (gr), consisting of biotite granodiorite, quartz monzonite, and quartz diorite, are mapped in the northern portion of the City in the Santa Monica Mountains (Jennings and Strand 1969). These quartz-bearing plutonic rocks formed either from the cooling of molten rock deep below the surface under high heat and high pressure, or from cooling magma injected into older rocks. The high-heat and high-pressure conditions in which these rocks formed are not suitable for life or fossilization.

Precambrian Metamorphic Rocks (P∈g)

Precambrian metamorphic rocks (P∈g), consisting quartz-plagioclase gneiss with ferromagnesian minerals, are mapped in the northernmost portion of the City (Jennings and Strand 1969). As discussed above, high temperatures and pressure involved with the formation of these metamorphic rocks would preclude the preservation of paleontological resources.

4.5.2 REGULATORY FRAMEWORK

Federal

Paleontological Resources Preservation Act

The Paleontological Resources Preservation Act (PRPA) was signed into law in 2009. It directs the Department of Agriculture and the Department of the Interior to implement comprehensive paleontological resource management programs on federal lands. The PRPA protects scientifically significant fossils on federal lands and provides a permitting system where researchers can collect and study scientifically significant fossils which will remain in the public trust. The act also allows for the collection of common plant and invertebrate fossils for personal, non-commercial use on federal lands. The PRPA requires the Secretaries of the Interior and Agriculture to manage and protect paleontological resources on federal land. The PRPA furthers the protection of fossils on federal lands by criminalizing the unauthorized removal of fossils.

Society for Vertebrate Paleontology Standard Guidelines

The SVP has established standard guidelines[1] that outline professional protocols and practices for conducting paleontological resource assessments and surveys, monitoring and mitigation, data and fossil recovery, sampling procedures, and specimen preparation, identification, analysis, and curation. The Paleontological Resources Preservation Act (PRPA) of 2009 calls for uniform policies and standards that apply to fossils on all federal public lands. All federal land management agencies are required to develop regulations that satisfy the stipulations of the PRPA. As defined by the SVP[2], significant nonrenewable paleontological resources are:

> Fossils and fossiliferous deposits here are restricted to vertebrate fossils and their taphonomic and associated environmental indicators. This definition excludes invertebrate or paleobotanical fossils except when present within a given vertebrate assemblage. Certain invertebrate and plant fossils may be defined as significant by a project paleontologist, local paleontologist, specialists, or special interest groups, or by lead agencies or local governments.

As defined by the SVP[3], significant fossiliferous deposits are:

[1] Society of Vertebrate Paleontology, Standard procedures for the assessment and mitigation of adverse impacts to paleontological resources, 2010.
[2] Society of Vertebrate Paleontology, Assessment and mitigation of adverse impacts to nonrenewable paleontologic resources: standard guidelines, Society of Vertebrate Paleontology News Bulletin 163:22-27, 1995.
[3] Society of Vertebrate Paleontology, Assessment and mitigation of adverse impacts to nonrenewable paleontologic resources.

> A rock unit or formation which contains significant nonrenewable paleontologic resources, here defined as comprising one or more identifiable vertebrate fossils, large or small, and any associated invertebrate and plant fossils, traces, and other data that provide taphonomic, taxonomic, phylogenetic, ecologic, and stratigraphic information (ichnites and trace fossils generated by vertebrate animals, e.g., trackways, or nests and middens which provide datable material and climatic information). Paleontologic resources are considered to be older than recorded history and/or older than 5,000 years BP [before present].

Based on the significance definitions of the SVP[4], all identifiable vertebrate fossils are considered to have significant scientific value. This position is adhered to because vertebrate fossils are relatively uncommon, and only rarely will a fossil locality yield a statistically significant number of specimens of the same genus. Therefore, every vertebrate fossil found has the potential to provide significant new information on the taxon it represents, its paleoenvironment, and/or its distribution. Furthermore, all geologic units in which vertebrate fossils have previously been found are considered to have high sensitivity. Identifiable plant and invertebrate fossils are considered significant if found in association with vertebrate fossils or if defined as significant by project paleontologists, specialists, or local government agencies.

State

California Environmental Quality Act

Paleontological resources are required to be analyzed under CEQA, which states in part a project will "normally" have a significant effect on the environment if it, among other things, will disrupt or adversely affect a paleontological site except as part of a scientific study. Specifically, in Section VII(f) of Appendix G of the *State CEQA Guidelines*, the Environmental Checklist Form, the question is posed thus: "Will the project directly or indirectly destroy a unique paleontological resource or site or unique geologic feature." To determine the uniqueness of a given paleontological resource, it must first be identified or recovered (i.e., salvaged).

California Penal Code Section 622.5

California Penal Code Section 622.5 provides the following: "Every person, not the owner thereof, who willfully injures, disfigures, defaces, or destroys any object or thing of archeological or historical interest or value, whether situated on private lands or within any public park or place, is guilty of a misdemeanor."

[4] Society of Vertebrate Paleontology, Assessment and mitigation of adverse impacts to nonrenewable paleontologic resources.

California PRC Section 5097.5

California PRC Section 5097.5 provides protection for paleontological resources on public lands, where Section 5097.5(a) states, in part, that:

> No person shall knowingly and willfully excavate upon, or remove, destroy, injure, or deface, any historic or prehistoric ruins, burial grounds, archaeological or vertebrate paleontological site, including fossilized footprints, inscriptions made by human agency, rock art, or any other archaeological, paleontological or historical feature, situated on public lands, except with the express permission of the public agency having jurisdiction over the lands.

Local

City of Los Angeles General Plan – Conservation Element

The City's General Plan Conservation Element, adopted in September 2001, recognizes paleontological resources in Section 3: "Archeological and Paleontological" (II-3), specifically the La Brea Tar Pits, and identifies protection of paleontological resources as an objective (II-5). The General Plan identifies site protection as important, stating, "Pursuant to CEQA, if a land development project is within a potentially significant paleontological area, the developer is required to contact a bonafide paleontologist to arrange for assessment of the potential impact and mitigation of potential disruption of or damage to the site." Section 3 of the Conservation Element includes policies for the protection of paleontological resources. As stated therein, it is the City's policy that paleontological resources be protected for historical, cultural research, and/or educational purposes. Section 3 sets as an objective the identification and protection of significant paleontological sites and/or resources known to exist or that are identified during "land development, demolition, or property modification activities." Section 5 of the Conservation Element recognizes the City's responsibility for identifying and protecting its cultural and historical heritage. The Conservation Element establishes the policy to continue to protect historic and cultural sites and/or resources potentially affected by proposed land development, demolition, or property modification activities, with the related objective to protect important cultural and historical sites and resources for historical, cultural, research, and community educational purposes[5].

[5] City of Los Angeles General Plan, Conservation Element, pages II-6 to II-9.

4.5.3 ENVIRONMENTAL IMPACTS

Threshold of Significance

In accordance with Appendix G of the State CEQA Guidelines the Housing Element Update would have a significant impact related to geology and soils if it would:

- **Threshold 4.5-1:** Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature

Methodology

To assess impacts to paleontological resources the City uses the SVP's Standard Procedures for the Assessment and Mitigation of Adverse Impacts to Paleontological Resources (SVP 2010) guidelines for categorizing paleontological sensitivity of geologic units in a project area. The study area for paleontological resources is defined as the entirety of the City of Los Angeles. This is an appropriate geographic extent of analysis because the Housing Element Update likewise applies to the entirety of the city, and impacts to paleontological resources are site-specific. The methodology for analyzing impacts of the Housing Element Update to paleontological resources involved conducting desktop research and analysis and developing a thorough characterization of the existing conditions which comprise the general geologic setting and paleontological sensitivity within the City limits and surrounding region. The activities of the Proposed Project were then compared to the existing conditions for paleontological resources. The analysis of impacts focuses on foreseeable construction from Regional Housing Needs Assessment (RHNA) build-out accommodated by the Housing Element because paleontological resources would only be impacted during construction-related ground disturbing activities.

As directed by the State CEQA Guidelines Appendix G Environmental Checklist, a project could result in potentially significant impacts to paleontological resources if it would destroy a "unique paleontological resource or site" or a "unique geologic feature." CEQA does not define what constitutes a unique paleontological resource or site; however, the SVP has defined a "significant paleontological resource" in the context of environmental review as follows:

> Fossils and fossiliferous deposits, here defined as consisting of identifiable vertebrate fossils, large or small, uncommon invertebrate, plant, and trace fossils, and other data that provide taphonomic, taxonomic, phylogenetic, paleoecologic, stratigraphic, and/or biochronologic information. Paleontological resources are typically to be older than recorded human history and/or older than middle Holocene (i.e., older than about 5,000 radiocarbon years) (SVP 2010).

For the purposes of this analysis, a significant impact under CEQA could occur if the Proposed Project would result in the loss of significant paleontological resources, as defined above.

Paleontological Resources Sensitivity

As discussed above, the methodology for this analysis included characterization of the existing paleontological sensitivity within the study area. Paleontological sensitivity refers to the potential for a geologic unit to produce significant paleontological resources. Sensitivity is determined by rock type, history of the geologic unit in producing significant fossils, and fossil localities recorded from that unit. Paleontological sensitivity is derived from the known fossil data collected from the entire geologic unit, not just from a specific survey.

Direct impacts to paleontological resources occur when earthwork activities, such as grading or trenching, cut into the geologic deposits within which fossils are buried and physically destroy the fossils. Since fossils are the remains of prehistoric animal and plant life, they are considered to be nonrenewable. Such impacts have the potential to be significant. The discovery of a vertebrate fossil locality is of greater significance than that of an invertebrate fossil locality, especially if it contains a microvertebrate assemblage. The recognition of new vertebrate fossil locations could provide important information on the geographical range of the taxa, their radiometric age, evolutionary characteristics, depositional environment, and other important scientific research questions. Vertebrate fossils are almost always significant because they occur more rarely than invertebrates or plants. Thus, geological units having the potential to contain vertebrate fossils are considered the most sensitive.

The SVP 2010 Guidelines describes sedimentary rock units as having a high, low, undetermined, or no potential for containing significant nonrenewable paleontological resources. This criterion is based on rock units within which vertebrates or significant invertebrate fossils have been determined by previous studies to be present or likely to be present. Significant paleontological resources are fossils or assemblages of fossils, which are unique, unusual, rare, uncommon, diagnostically or stratigraphically, taxonomically, or regionally. The paleontological sensitivity of the project site has been evaluated according to the following SVP (2010) categories, which are presented below.

The discussion below provides definitions of paleontological sensitivity as set forth by the SVP 2010 Guidelines and does not constitute an analysis of the Proposed Project. The definitions below are provided as context for the impact analysis under Impact 4.5-1. The paleontological sensitivity areas are shown in Figure 4.5-2.

High Potential (Sensitivity)

Rock units from which significant vertebrate or significant invertebrate fossils or significant suites of plant fossils have been recovered are considered to have a high potential for containing significant non-renewable fossiliferous resources. These units include, but are not limited to, sedimentary formations and some volcanic formations which contain significant nonrenewable paleontological resources anywhere within their geographical extent, and sedimentary rock units temporally or lithologically suitable for the preservation of fossils. Sensitivity comprises both (a) the potential for yielding abundant or significant vertebrate fossils or for yielding a few significant fossils, large or small, vertebrate, invertebrate, or botanical and (b) the importance of recovered evidence for new and significant taxonomic, phylogenetic, ecologic, or stratigraphic data. Areas that contain potentially datable organic remains older than recent, including deposits associated with nests or middens, and areas that may contain new vertebrate deposits, traces, or trackways are also classified as significant. The SVP 2010 Guidelines also recommend full-time paleontological monitoring during any project-related ground disturbance in geologic units with high sensitivity; the mitigation measures listed below for the Proposed Project include the use of paleontological monitoring during ground-disturbing activities.

Low Potential (Sensitivity)

Sedimentary rock units that are potentially fossiliferous, but have not yielded fossils in the past or contain common and/or widespread invertebrate fossils of well documented and understood taphonomic (processes affecting an organism following death, burial, and removal from the ground), phylogenetic species (evolutionary relationships among organisms), and habitat ecology. Generally, these units will be poorly represented by specimens in institutional collections and will not require protection or salvage operations. Reports in the paleontological literature or field surveys by a qualified vertebrate paleontologist may allow determination that some areas or units have low potentials for yielding significant fossils prior to the start of construction.

Undetermined Potential (Sensitivity)

Areas underlain by sedimentary rock units for which little information is available are considered to have undetermined fossiliferous potentials. Field surveys by a qualified vertebrate paleontologist to specifically determine the potentials of the rock units are required before programs of impact mitigation for such areas may be developed. Figure 4.5-2 shows no areas of undetermined potential in the project area.

No Potential

Rock units of metamorphic or igneous origin are commonly classified as having no potential for containing significant paleontological resources. For geologic units with no sensitivity, a paleontological monitor is not required.

Project Impacts and Mitigation Measures

Threshold 4.5-1	Will the Housing Element Update directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?

Impact 4.5-1 The City of Los Angeles is primarily urbanized and the Housing Element Update would prioritize development on infill sites that have been previously developed and/or disturbed and would be unlikely to affect paleontological resources. However, housing development accommodated under the Housing Element Update could cause a substantial adverse change in or disturb known or unknown paleontological resources. Mitigation Measures 4.5-1(a) through 4.5-1(c) would minimize potential impacts during excavation activities. However, because it is not feasible to impose the mitigation measures on all future projects, impacts to paleontological resources would be ***significant and unavoidable***.

Based on a paleontological literature review and existing fossil locality information available on the Paleobiology Database and UCMP database, the paleontological sensitivity of the geologic units underlying the City were determined in accordance with criteria set forth by the SVP (2010). The general presence and extent of geologic units in the project area are portrayed on Figure 4.5-1, and the paleontological sensitivity of the most common geologic units shown on Figure 4.5-1 and summarized in Table 4.5-1. In this geologic context, the depths at which these units become old enough to yield fossils are highly variable; however, paleontological resources generally do not occur at depths of less than five feet throughout most of the LA Basin. Sensitive units could occur at depths shallower than five feet on basin margins and near contact points with high sensitivity units. Accurately assessing the boundaries between younger and older units within the City requires site-specific stratigraphic data, some form of radiometric dating, or fossil analysis from nearby sites; in the absence of such information, this analysis considers the likelihood for paleontological resources to be encountered based on development type, previous disturbance on the site, and general geologic characteristics of the site.

The RHNA development accommodated by Housing Element will mostly occur on infill sites and in areas that have previously been developed and disturbed. Previously disturbed areas such as infill sites are less likely to contain paleontological resources than undisturbed areas which have not previously been excavated or disturbed below the ground surface. In addition, where suitable geologic units are present, paleontological resources are most likely to occur at depths greater than the first five feet below the ground surface. As such, while development under the Housing Element Update would most often occur on previously disturbed areas, paleontological resources could be impacted if a previous site development did not include excavation of greater than five feet below the ground surface. Similarly, if a proposed

development would occur on a previously disturbed site but would require deeper excavations than were previously conducted, paleontological resources may be impacted. Potential impacts to paleontological resources are most likely to occur during the construction of subterranean parking levels, and in areas with known paleontological sensitivity, as defined by the geologic units summarized above and portrayed on Figure 4.5-1. Areas of known sensitivity also include hillsides surrounding the city and in central portions of the city in and around Hancock Park, where substantial paleontological resources have previously been discovered.

The types of housing units anticipated under the Housing Element Update would generally fall into five categories of development projects, each of which is addressed below with respect to its potential to impact paleontological resources. Table 4-2 in Section 4, *Environmental Analysis*, provides an overview of previous housing projects and their associated environmental impacts. As shown therein, none of those case studies would result in significant unavoidable impacts to Geology and Soils, which is the issue area under which potential impacts to paleontological resources are addressed. As stated under *Methodology*, potential impacts to paleontological resources are limited to project construction activities.

- **Multi-family residential:** Multi-family residential projects may range in size from small apartment buildings with 2-10 units to larger apartment buildings and high-rise structures with hundreds of units. Because new construction would be required, multi-family developments of any size would cause ground disturbance. Large multi-family development projects may have the potential to result in more substantial impacts due to their greater footprint and because such features as subterranean parking structures would cause a greater depth of disturbance.

  An example is the 6220 West Yucca Project, a multi-family residential development consisting of a new 20-story building and a new three-story building, located in the Hollywood Community Plan area, that was found to potentially impact paleontological resources due to extensive excavation. To reduce potential project impacts due to ground-disturbing activities, including the construction of subterranean parking, the following mitigation measures were adopted for the 6220 West Yucca Project: the requirement for a qualified paleontologist to conduct paleontological monitoring during ground-disturbing construction activities, the diversion of excavation activities in the case that paleontological resources were unearthed, and the drafting of a report at the conclusion of monitoring. The EIR for the 6220 West Yucca Project provided the following analysis and conclusion for potential impacts to paleontological resources (City of Los Angeles 2020):

  > *[T]he Project Site contains potentially fossiliferous older Quaternary alluvial fan and fluvial deposits that underlie surficial deposits. Numerous fossil specimens (horse, camel, mastodon, mammoth, and bison) have been encountered in these deposits relatively near the Project Site from depths between five to 12 feet below*

surface and 47 and 80 feet below the surface. The closest fossil localities (LACM 6297-6300) are situated approximately one-half mile east of the Project Site, along Hollywood Boulevard and between the Hollywood Freeway (US-101) and Western Avenue. Other fossil localities have also been recorded approximately two to three miles south of the Project Site.65 The Project would include excavation to potential depths of approximately 22 to 25 feet below surface for the subterranean parking levels, with footings extending down to approximately 40 feet below ground surface. As a result of these findings, Project grading and excavation in older Quaternary Alluvium deposits have a high potential to encounter fossils. Due to this potential, impacts on paleontological resources are considered potentially significant prior to mitigation. Mitigation Measures MM-PALEO-1 through MM-PALEO-3 are therefore identified to reduce this potentially significant impact to buried/unknown paleontological resources to a less than significant level.

Mitigation Measure MM-PALEO-1 from the 6220 West Yucca Project EIR, as referenced above, requires that prior to the issuance of a demolition permit, the project Applicant shall retain a qualified paleontologist meeting the SVP standards to develop and implement a paleontological monitoring program for construction excavations that would encounter the fossiliferous older Quaternary alluvium (City of Los Angeles 2020). Mitigation Measure MM-PALEO-3 from the 6220 West Yucca Project EIR requires that the qualified paleontologist prepare a report summarizing the results of the monitoring and salvaging efforts, the methodology used in these efforts, as well as a description of the fossils collected and their significance (City of Los Angeles 2020). The Yucca EIR found that implementation of these measures would provide for avoidance and recovery of resources if an inadvertent encounter were to occur, such that potentially significant impacts to paleontological resources would be reduced to a less-than-significant level. Cumulative impacts would also be less than significant.

- **Single-family residential:** Single-family residential projects may range in size and scale from smaller single-family homes to larger single-family homes, and from small-lot subdivisions to multi-property single-family subdivisions. Single-family developments of any size would cause ground disturbance. However, large single-family development projects, such as residential subdivisions, may have the potential to result in more substantial impacts due to their greater footprint and depth of ground disturbance.

  An example is the Hidden Creeks Estates Project, located at 12100 Browns Canyon Road in Chatsworth, in an area immediately northwest of the Porter Ranch community in the northwestern portion of the San Fernando Valley. This project included a large single-family residential development consisting of 188 single-family residences, a park, and an equestrian boarding facility on a 259-acre development site. The EIR for the Hidden Creeks Estates Project identified impacts to paleontological resources on the basis that "excavation in undisturbed sediments within the boundaries of the project site has high

potential to adversely impact significant nonrenewable paleontological resources" (City of Los Angeles 2017a). To reduce potential impacts from ground-disturbing activities to paleontological resources in areas mapped as having high paleontological sensitivity, the EIR for the Hidden Creeks Estates Project identified the following mitigation measures to reduce impacts to a less-than-significant level: MM-CR-1, Retention of Paleontologist; MM-CR-2, Museum Storage Agreement; MM-CR-3, Preconstruction Coordination and Environmental Awareness Training; MM-CR-4, Paleontological Monitoring and Fossil/Sample Recovery; MM-CR-5, Final Laboratory Tasks; and MM-CR-6, Reporting (City of Los Angeles 2017a). These mitigation measures for the Hidden Creeks Estates Project collectively provide for a qualified paleontologist to conduct paleontological monitoring during ground-disturbing construction activities, as well as the diversion of excavation activities in the case that paleontological resources were unearthed, fossil and sample recovery, and the drafting of a report at the conclusion of monitoring.

- **ADUs:** ADUs include attached units that are physically connected to an existing structure, and detached units that are free-standing structures. ADUs may consist of new construction, additional construction, or conversion. Of these types, ADUs involving the conversion of existing floor area are the least likely to impact paleontological resources, as they are unlikely to require ground disturbance including excavation. ADUs involving new construction would require ground disturbance that could include excavation and therefore would have potential to impact paleontological resources. However, by nature of being an ADU, an existing structure would also be present on the site, and ground disturbing activities including excavation would have occurred during construction of the existing structure, such that paleontological resources at the site would likely have already been disturbed. In addition, ADUs would be less likely than other development types to involve impacts to a paleontological resource due to their comparatively small footprint including depth of ground disturbance. With that said, impacts from ADUs involving excavation of previously undisturbed soils could still occur.
- **Mixed use development:** Mixed use development could range in size and scale from neighborhood commercial mixed use with smaller nonresidential components, to high-rise mixed-use with larger nonresidential components. Mixed use developments of any size would cause ground disturbance. However, large-scale mixed use development projects may have greater potential to result in substantial impacts to a paleontological resource due to their potential to have a greater footprint and depth of ground disturbance, including through the construction of under-ground parking structures.

  An example is the 668 S. Alameda Street Project, a mixed-use development consisting of 475 live/work units and ground-floor commercial space, in the Arts District portion of the Central City North Community Plan Area. The EIR for the 668 S. Alameda Street Project identified Impact PALEO-1, which described that the project site was previously disturbed by the original construction of the former and

existing use; however, project grading and excavation may encounter native soil/sediment associated with older Quaternary Alluvium, which has high potential for containing buried paleontological resources, and therefore construction of the project may result in the loss of a unique paleontological resource or site or a unique geological feature (City of Los Angeles 2017b). The EIR for the 668 S. Alameda Street Project identified Mitigation Measures MM-PALEO-1, MM-PALEO-2, and MM-PALEO-3, which collectively require a qualified paleontologist to conduct paleontological monitoring during excavation, as well as procedures for the proper handling of any encountered paleontological resources, and the preparation of a report to document paleontological monitoring and associated findings (City of Los Angeles 2017b). With the implementation of the aforementioned mitigation measures for the 668 S. Alameda Street Project, potential impacts to paleontological resources were reduced to a less-than-significant level.

- **Conversion and/or rehabilitation:** Existing nonresidential, residential and mixed-use structures could be converted to residential uses under the Housing Element Update or rehabilitated to accommodate new residential uses. The conversion or rehabilitation of existing properties would typically not involve new construction or associated ground-disturbing activities including excavation. To the extent that they would involve new construction, impacts would potentially be similar to those described for multi-family and mixed-use development. Development of this type therefore has minimal potential to impact a paleontological resource.

Potential impacts to paleontological resources would vary depending on the project type, the extent of required excavation, the characteristics of previous activities on the project site, and the site-specific composition of geologic units underlying the project site, including their potential to contain paleontological resources. Housing development accommodated under the Housing Element Update will primarily be characterized by development on infill sites in urbanized areas of the City, or areas where there are high levels of previous disturbance, such that the potential to encounter paleontological resources is generally low. In areas with high paleontological sensitivity, resources may be encountered during ground-disturbing activities at any depth, including shallower than five feet. In previously undisturbed areas, the potential to encounter paleontological resources will be determined by the geologic units present and is generally higher than developed areas that have been previously excavated. Table 4-2 in Section 4, *Environmental Analysis*, provides an overview of previous housing projects and their associated environmental impacts. As shown therein, out of the 54 case studies, none would result in significant unavoidable impacts to Geology and Soils, which is the issue area under which potential impacts to paleontological resources are addressed. As stated under *Methodology*, potential impacts to paleontological resources are limited to project construction activities.

Most housing development accommodated under the Housing Element Update would be unlikely to involve impacts to paleontological resources, due to being located in infill areas where previous disturbance has occurred. However, given the high number of housing units that are expected to be accommodated under the Housing Element Update, as well as the extent of mapped geologic units with high paleontological sensitivity in the City, and their overlap with sites that are identified in the Inventory of Sites and as potential sites for the Rezoning Program, a substantial adverse change in or a disturbance to known or unknown resources are possible, which would constitute a significant impact under CEQA. The Housing Element Update has a ***potentially significant impact*** to paleontological resources and/or unique geologic features.

Mitigation Measures

For the purposes of the mitigation measures provided below, a "qualified monitor" is an individual with a minimum of a bachelor's or equivalent degree in geology or paleontology and no less than one year of experience performing paleontological monitoring and salvaging fossil materials in the relevant geologic province, or an equivalent degree in biology or pursuit of a degree in geology or paleontology and no less than two years of comparable experience. A "qualified paleontologist" is a paleontologist who meets the Society of Vertebrate Paleontology standards for a Principal Investigator or Project Paleontologist; has demonstrated competence in field techniques, preparation, identification, curation, and reporting and/or a graduate degree in paleontology or geology or a publication record in peer reviewed journals; at least two years professional experience with administration and project management experience; proficiency in recognizing fossils in the field and determining their significance; expertise in local geology, stratigraphy, and biostratigraphy; and experience collecting vertebrate fossils in the field.

4.5-1(a) Paleontological Procedures for Discretionary Projects

For all discretionary projects that involve excavation or grading activities at depths greater than previous disturbance on the respective site(s), prior to the start of construction, the following shall be conducted as discussed in detail below: prepare a resource assessment and records search for the presence of paleontological resources to determine if the project site is underlain by paleontological resources; monitor all excavation and grading activities in areas underlain by soils or geologic units potentially containing paleontological resources; and identify, record, and evaluate all paleontological resources uncovered during project construction and submit a paleontological assessment report to the City for review and approval. In addition, during project construction, the following shall be conducted as discussed in detail below: cease all construction activities in the event of the discovery of paleontological resources; conduct fossil recovery as necessary by a qualified paleontologist; avoid handling of paleontological resources by parties other than the qualified paleontologist responsible for

conducting fossil recovery; and resume construction activities only upon clearance by the qualified paleontologist. These procedures, as detailed below, shall be implemented to avoid impacts to paleontological resources or reduce potential impacts to a less-than-significant level:

- Prior to excavation and grading activities, a qualified paleontologist shall prepare a resource assessment and records search for the potential presence of paleontological resources. This assessment shall be informed by records from the Natural History Museum of Los Angeles County. If the assessment determines the project site is underlain by soils or geologic units potentially containing paleontological resources and the project would include ground-disturbing activities, a qualified paleontologist shall monitor all excavation and grading activities, and shall identify, record, and evaluate the significance of any paleontological finds during construction. The paleontologist's assessment shall be submitted to the City for review and approval prior to the commencement of construction activities, and construction may not commence until the City has provided approval of the outcome of the paleontologist's assessment of the project site.

- If paleontological resources are uncovered during construction activities (in either a previously disturbed or undisturbed area), all ground-disturbing activities in the area of the find shall cease until a qualified paleontologist has evaluated the find, and identified and implemented the appropriate course of action in accordance with federal, state, and local guidelines. This may require fossil recovery, described below. Construction activities in the area of the discovery shall commence again only after the identified resource(s) are properly processed by a qualified paleontologist, and if construction activities are cleared by the qualified paleontologist to continue.

- If fossils are discovered, a qualified paleontologist shall recover them. Typically, fossils can be safely salvaged quickly by a single paleontologist and not disrupt construction activity. In some cases, larger fossils (such as complete skeletons or large mammal fossils) require more extensive excavation and longer salvage periods. In this case the paleontologist would have the authority to temporarily direct, divert or halt construction activity to ensure that the fossil(s) can be removed in a safe and timely manner. Handling and disposition of fossils is done at the direction and guidance of a qualified paleontologist.

- Personnel of the project shall not collect or move any paleontological resources or associated materials; the identified qualified paleontologist is the only party that shall handle paleontological find(s), including but not limited to collection or removal.

- If cleared by the qualified paleontologist, construction activity may continue unimpeded on other portions of the project site that would not affect evaluation or recovery of the identified resource(s).

4.5-1(b) Worker Environmental Awareness Program, Fossil Salvage, and Construction Monitoring

For all discretionary projects located on previously undisturbed land, and for all discretionary projects that would involve excavation of greater than 20 feet deep or excavation for two or more subterranean levels, the following shall be implemented as discussed in detail below: conduct a Paleontological Worker Environmental Awareness Program (WEAP); conduct fossil recovery as necessary by a qualified paleontologist; conduct paleontological monitoring for all ground disturbing activities in undisturbed sediments at depths greater than five feet; and reduce or cease paleontological monitoring only when determined to be appropriate by the qualified paleontologist. During the implementation of these requirements, all reasonable methods shall be used to determine the potential that paleontological resources are present on the project site, including through searches of databases and records, and surveys. If there is a medium to high potential that paleontological resources are located on the project site and it is possible that these resources will be impacted, monitoring will be conducted for all excavation, grading or other ground disturbance activities to identify any resources and avoid potential impacts to such resources. These procedures, as detailed below, shall be implemented to avoid impacts to paleontological resources or reduce potential impacts to a less-than-significant level:

- **Paleontological WEAP.** Prior to the start of construction, the paleontological monitor shall conduct training for construction personnel regarding the appearance of fossils and the procedures for notifying paleontological staff should fossils be discovered by construction staff. In the event of a fossil discovery by construction personnel, the City shall be notified and all work in the immediate vicinity of the find shall cease and a qualified paleontologist shall be contacted to evaluate the find before restarting work in the area. If it is determined that the fossil(s) is(are) scientifically significant, the paleontological monitor shall complete the next two steps, for fossil salvage and construction monitoring.

- **Fossil Salvage.** The qualified paleontologist or designated paleontological monitor shall recover intact fossils and notify the City of any fossil salvage and recovery efforts. Typically, fossils can be safely salvaged quickly by a single paleontologist and not disrupt construction activity. In some cases, larger fossils (such as complete skeletons or large mammal fossils) require more extensive excavation and longer salvage periods. In this case the paleontologist shall have the authority to temporarily direct, divert or halt construction activity to ensure that the fossil(s) can be removed in a safe and timely manner. Any fossils shall be handled and deposited consistent with a mitigation plan prepared by the paleontological monitor.

- **Paleontological Resource Construction Monitoring**. Additional ground disturbing construction activities (including grading, trenching, foundation work and other excavations) in undisturbed

sediments at depths greater than five feet is considered to have high paleontological sensitivity, and shall be monitored on a full-time basis by a qualified paleontologist or designated paleontological monitor during ground disturbance, including the initial five feet below the ground surface, as areas with high paleontological sensitivity may contain resources at shallow depths and within the first five feet. If the paleontological monitor determines that full-time monitoring is no longer warranted, he or she may recommend that monitoring be reduced to periodic spot-checking or cease entirely; revisions to the monitoring plan shall be submitted to the City for review and approval prior to implementation. Monitoring shall be reinstated if any new or unforeseen deeper ground disturbances are required.

4.5-1(c) Treatment of Paleontological Resources

For all projects where known paleontological resources are present and would be disturbed by project activities, and for all projects where the extent of paleontological resources are unknown and paleontological monitoring is conducted in accordance with Mitigation Measures 4.5-1(a) or 4.5-1(b) as provided above, all paleontological resources identified on a project site shall be assessed by a qualified paleontologist and treated in accordance with federal, state, and local standards. The qualified paleontologist shall prepare a report according to current professional standards including those of the SVP that describes the resource, how it was assessed, and disposition. The report shall be submitted to the City for review and approval. Project activities shall not proceed until the analysis and treatment of on-site paleontological resources has been approved by the City.

Significance of Impacts After Mitigation

The implementation of Mitigation Measures 4.5-1(a) through 4.5-1(c) to future housing development accommodated by the Housing Element would reduce potential project impacts to paleontological resources and unique geologic units to a less-than-significant level. As discussed in the impact analysis provided above, example projects that have been previously reviewed for CEQA purposes and represent the types of projects that would occur under the Housing Element Update have included mitigation measures to minimize or avoid potential impacts to paleontological resources. Mitigation Measures 4.5-1(a) through 4.5-1(c) for the Housing Element Update, as discussed above and summarized below, are comparable to those included in previously approved projects.

- Mitigation Measure 4.5-1(a), *Paleontological Procedures for Discretionary Projects*, requires that all discretionary projects involving ground disturbance to depths greater than previous disturbance on the subject site(s) are analyzed for paleontological resources, and that construction activities are monitored and reported on for paleontological resources.

- Mitigation Measure 4.5-1(b), *Worker Environmental Awareness Program, Fossil Salvage, and Construction Monitoring*, requires that all discretionary projects located on previously disturbed land or involving ground disturbance to depths greater than 20 feet include a WEAP, paleontological monitoring, and the proper handling of paleontological resources.
- Mitigation Measure 4.5-1(c), *Treatment of Paleontological Resources*, requires that all paleontological resources identified on a project site during implementation of the mitigation measures listed above shall be assessed by a qualified paleontologist and treated in accordance with federal, state, and local standards.

The implementation of the mitigation measures summarized above would reduce potential impacts to paleontological resources from projects developed under the Housing Element Update to a less-than-significant level. However, as discussed above, these measures are specific to discretionary projects related to the Housing Element Update. The City finds that it is not feasible to impose the Housing Element Update mitigation measures on ministerial projects, based upon staff availability and resource limitations to adopt, impose and enforce such measures, as well as the impact to the production to needed housing. Additionally, mitigation measures may be infeasible for some future discretionary projects. Due to these possibilities, potential impacts to paleontological resources and unique geological features associated with implementation of the Housing Element Update remain ***significant and unavoidable***.

Cumulative Impacts

The geographic extent of cumulative analysis for the Housing Element Update is the entire City of Los Angeles, consistent with the impact analysis provided above. Cumulative impacts may occur if impacts of the Proposed Project combine with similar impacts of other projects in the cumulative scenario. In this case, the Proposed Project is the Housing Element Update, inclusive of all future development projects that may occur under the Housing Element Update. Therefore, the cumulative scenario is not comprised of other Housing Element Update projects (which collectively constitute the Proposed Project), but rather of projects unrelated to the Housing Element Update that could result in similar impacts to paleontological resources as projects under the Housing Element Update, such as nonresidential development. As such, cumulative impacts to paleontological resources could occur if impacts to paleontological resources from development projects under the Housing Element Update combine with similar impacts to paleontological resources of other development projects throughout the geographic extent of analysis, which is defined as the City of Los Angeles.

Impacts to paleontological resources are site-specific, such that cumulative impacts would only occur if other projects in the cumulative scenario would occur on the same site and/or affect the same paleontological resource(s) as a project under the Housing Element Update. There are five general types of

projects that may occur under the Housing Element Update, including multi-family residential units, single-family residential units, accessory dwelling units (which require the presence of an existing structure), mixed-use development, and conversion or rehabilitation of existing structures. These types of projects typically encompass the entirety of the associated project site, such that other projects in the cumulative scenario would not have potential to combine with impacts of Housing Element Update projects to paleontological resources.

However, as discussed under *Significance of Impacts after Mitigation*, potential impacts of Housing Element Update projects to paleontological resources are considered significant and unavoidable, due to uncertainties associated with future ministerial projects and the project-specific feasibility of identified mitigation measures. In addition, possible that a paleontological resource may extend beneath multiple individual project sites, such that two or more separate projects in the cumulative scenario could impact the same paleontological resource(s). Implementation of Mitigation Measures 4.5-1(a) through 4.5-1(c) could reduce potential impacts of discretionary projects under the Housing Element Update to paleontological resources, but the measure is not applicable to ministerial projects and impacts may still result with mitigation depending on unusual circumstances. Therefore, because impacts of the Housing Element Update are considered significant and unavoidable, in addition to the potential for cumulative scenario project impacts to combine with impacts of Housing Element Update projects, cumulative impacts to paleontological resources would be ***significant and unavoidable***.

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4.6 GREENHOUSE GAS EMISSIONS

This section evaluates potential impacts related to greenhouse gas (GHG) emissions. GHGs are emitted by both natural processes and human activities. The GHG data supporting this section is included as Appendix C of this EIR. As discussed in the Initial Study (see Appendix A), impacts from the Safety Element were found to be less than significant with respect to GHG emissions and therefore are not discussed in this EIR.

The accumulation of GHGs in the atmosphere regulates Earth's temperature. The State of California has undertaken initiatives designed to address the effects of GHGs, and to establish targets and emission reduction strategies for GHG emissions in California. The analysis of GHG emissions and climate change is unique under CEQA, largely because of the global nature of climate change. Typical CEQA analyses address local actions that have local – or regional – impacts, whereas climate change analyzes the relationship between local activities and the resulting potential, if any, for global environmental impacts. Based on this, the focus of GHG emission analysis is on cumulative impacts. As provided by the State Natural Resources Agency in the latest update to the CEQA Guidelines: "In determining the significance of a project's greenhouse gas emissions, the lead agency should focus its analysis on the reasonably foreseeable incremental contribution of the project's emissions to the effect of climate change" (15064.4(b)).

4.6.1 ENVIRONMENTAL SETTING

Global Climate Change

Earth's natural warming process is known as the "greenhouse effect." Certain atmospheric gases act as an insulating blanket for solar energy to keep the global average temperature in a suitable range for life support. The greenhouse effect raises the temperature of Earth's surface by about 60 degrees Fahrenheit. With the natural greenhouse effect, the average temperature of Earth is about 45 degrees Fahrenheit; without it, Earth would be about minus 15 degrees. It is normal for Earth's temperature to fluctuate over extended periods of time. Over the past 100 years, Earth's average global temperature has generally increased by one-degree Fahrenheit. In some regions of the world, the increase has been as much as four degrees Fahrenheit.

Scientists studying the particularly rapid rise in global temperatures during the late twentieth century believe that natural variability alone does not account for that rise. Rather, human activity spawned by the industrial revolution has likely resulted in increased emissions of carbon dioxide and other forms of GHGs, primarily from the burning of fossil fuels (i.e., during motorized transport, electricity

generation, consumption of natural gas, industrial activity, manufacturing, etc.) and deforestation, as well as agricultural activity and the decomposition of solid waste.

GHG Components and Effects

The California Global Warming Solutions Act of 2006 (discussed in the following pages) defined GHGs to include carbon dioxide (CO_2), methane (CH_4), nitrous oxide (N_2O), hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), and sulfur hexafluoride (SF_6). Numerous other gases can contribute to climate change, however, typically represent a negligible portion of GHG inventories. A general description of each GHG discussed in this report is provided in Table 4.6-1. CO2 is the most abundant GHG. Other GHGs are less abundant but have higher global warming potential (discussed below) 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.

Global Warming Potential

Global Warming Potential (GWP) is one type of simplified index based upon radiative properties that is used to estimate the potential future impacts of emissions of different gases upon the climate system in a relative sense. 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. A summary of the atmospheric lifetime and GWP of selected gases is presented in Table 4.6-2.

Table 4.6-1 Description of Greenhouse Gases

GHG	General Description
CO_2	CO_2 is an odorless, colorless GHG, which has both natural and man-made sources. Natural sources include the following: decomposition of dead organic matter; respiration of bacteria, plants, animals, and fungus; evaporation from oceans; and volcanic outgassing; man made sources of CO_2 are burning coal, oil, natural gas, and wood.
CH_4	CH_4 is a flammable gas and is 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. There are no ill health effects from CH_4. 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 from landfills, fermentation of manure, and cattle.
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.
HFCs	HFCs are synthetic man-made chemicals that are used as a substitute for chlorofluorocarbons (CFCs) for automobile air conditioners and refrigerants. 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 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.
PFCs	PFCs have stable molecular structures and do not break down through the chemical processes in the lower atmosphere. High-energy ultraviolet rays about 60 kilometers above 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.
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.
Source: Association of Environment Professionals, Alternative Approaches to Analyze Greenhouse Gas Emissions and Global Climate Change in CEQA Documents, Final, June 29, 2007.	

Table 4.6-2 Atmospheric Lifetimes and Global Warming Potentials

GHG	Lifetime (Years)	Global Warming Potential (20-Year)	Global Warming Potential (100-Year)
Carbon dioxide (CO_2)	50–200	1	1
Methane (CH_4)*	12.4	84	28
Nitrous oxide (N_2O)	121	264	265
HFC-23	222	10,800	12,400
HFC-32	5.2	2,430	677
HFC-125	28.2	6,090	3,170
HFC-134a	13.4	3,710	1,300
HFC-143a	47.1	6,940	4,800
HFC-152a	1.5	506	138
HFC-227ea	38.9	5,360	3,350
HFC-236fa	242	6,940	8,060
HFC-43-10mee	16.1	4,310	1,650
CF_4	50,000	4,880	6,630
C_2F_6	10,000	8,210	11,100
C_3F_8	2,600	6,640	8,900
C_4F_{10}	2,600	6,870	9,200
c-C_4F_8	3,200	7,110	9,540
C_5F_{12}	4,100	6,350	8,550
C_6F_{14}	3,100	5,890	7,910
SF_6	3,200	17,500	23,500
Source: Intergovernmental Panel on Climate Change 2014.			

State GHG Emissions Inventory

Impacts of Global Climate Change in California

The California Environmental Protection Agency (CalEPA) published a report titled Scenarios of Climate Change in California: An Overview, Climate Scenarios report, in February 2006 that predicts future impacts of global warming on California.

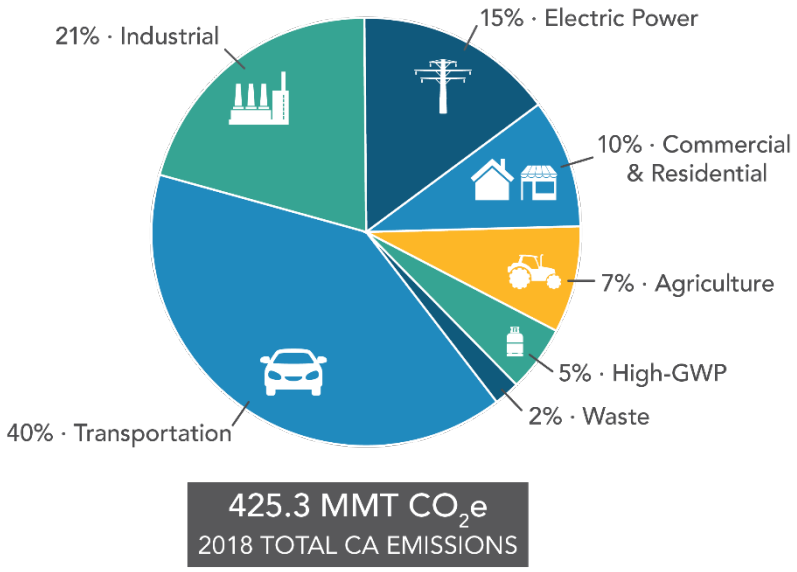
On December 2, 2009, the California Natural Resources Agency released its California Climate Adaptation Strategy report that details many vulnerabilities arising from climate change with respect to matters such as temperature extremes, sea level rise, wildfires, floods and droughts and precipitation

changes. This report responds to the Governor's Executive Order S-13-2008 that called on State agencies to develop California's strategy to identify and prepare for expected climate impacts.

According to these reports, substantial temperature increases arising from increased GHG emissions potentially could result in a variety of impacts to the people, economy, and environment of California. This includes a projected increase in extreme conditions, with the severity of the impacts depending upon actual future emissions of GHGs and associated warming. Under the emissions scenarios of the Climate Scenarios report, the impacts of global climate change in California have the potential to include, but are not limited to, the areas of public health, water resources, agriculture, forests and landscapes, and rising sea levels.

As illustrated in Figure 4.6-1, the statewide emissions inventory of GHGs in 2018 (the most recent year available) was 425.3 million metric tons of carbon dioxide equivalents (MMTCO2e) (California Air Resources Board [CARB] 2020). Sources of emissions include Transportation (40 percent), Industrial Sources (21 percent), Electricity Generation (15 percent), Agriculture (7 percent), Residential (6 percent), Commercial (4 percent), High GWP (5 percent, and Waste (2 percent) (CARB 2020).

Figure 4.6-1 California GHG Emissions Inventory by Source



Source: CARB 2020

Los Angeles GHG Emissions Inventory

According to Los Angeles' *Green New Deal* 2019, the City has reduced GHG emissions to 25 percent below 1990 levels as of 2017 (City of Los Angeles 2019a). The Los Angeles Department of Water and Power (LADWP) is currently striving to go from 50 percent energy reliant on coal power to coal-free by 2025, and to go from 30 percent renewable energy reliant to 100 percent by 2045 (City of Los Angeles 2019a).

4.6.2 REGULATORY FRAMEWORK

Climate change and GHG emissions are governed by an evolving body of laws, regulations, and case law. Below are summaries of key regulations; however, the discussion below should not be considered exhaustive of this growing body of regulation.

Federal

Clean Air Act

The U.S. Supreme Court in *Massachusetts et al. v. Environmental Protection Agency*, 549 US 497 (2007) held that the United States Environmental Protection Agency (USEPA) was authorized by the Clean Air Act (CAA) to regulate CO_2 and other GHG emissions from new motor vehicles. The Court did not mandate that the USEPA enact regulations to reduce GHG emissions, but found that the only instances in which the USEPA could avoid taking action were 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.

On December 7, 2009, the USEPA issued an "endangerment finding" under the CAA, concluding that GHGs threaten the public health and welfare of current and future generations and that motor vehicles contribute to GHG pollution (USEPA 2020). These findings provide the basis for adopting new national regulations to mandate GHG emission reductions under the federal CAA. The USEPA's endangerment finding paves the way for federal regulation of GHGs.

Under the Consolidated Appropriations Act of 2008 (HR 2764), Congress established mandatory GHG reporting requirements for some emitters of GHGs. In addition, on September 22, 2009, the USEPA issued the Final Mandatory Reporting of Greenhouse Gases Rule. The rule requires annual reporting to the USEPA of GHG emissions from large sources and suppliers of GHGs, including facilities that emit 25,000 metric tons (MT) or more a year of GHGs.

Federal Corporate Average Fuel Economy Standards

In response to the *Massachusetts v. Environmental Protection Agency* ruling discussed above, the Bush Administration issued an Executive Order on May 14, 2007, directing the USEPA, the Department of Transportation (DOT), and the Department of Energy (DOE) to establish regulations that reduce GHG emissions from motor vehicles, non-road vehicles, and non-road engines by 2008.

On October 10, 2008, the National Highway Traffic Safety Administration (NHTSA) released a final environmental impact statement analyzing proposed interim standards for passenger cars and light trucks in model years 2011 through 2015. The NHTSA issued a final rule for model year 2011 on March 30, 2009 (NHTSA 2009).

On May 19, 2009, the president announced a new National Fuel Efficiency Policy aimed at increasing fuel economy and reducing GHG pollution. This policy is expected to increase fuel economy by more than five percent by requiring a fleet-wide average of 35.5 miles per gallon by 2016 starting with model year 2012.

On May 7, 2010, the USEPA and the NHTSA issued a final rule regulating fuel efficiency and GHGs from motor vehicles for cars and light-duty trucks for model years 2012–2016 (USEPA and NHTSA 2010). On May 21, 2010, the President issued a memorandum to the Secretaries of Transportation and Energy, and the Administrators of the USEPA and the NHTSA calling for the establishment of additional standards regarding fuel efficiency and GHG reduction, clean fuels, and advanced vehicle infrastructure (GPO 2010). In response to this directive, USEPA and NHTSA issued a Supplemental Notice of Intent announcing plans to propose stringent, coordinated federal GHG and fuel economy standards for model year 2017-2025 light-duty vehicles (GPO 2011). The agencies proposed standards 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 if this level were achieved solely through fuel efficiency. California has announced its support of this national program (CARB 2011a). The final rule was adopted in October 2012 and NHTSA intends to set standards for model years 2022-2025 in future rule-making (USEPA and NHTSA 2012; NHTSA 2012).

In addition to the regulations applicable to cars and light-duty trucks, on August 9, 2011, the USEPA and the NHTSA announced fuel economy and GHG standards for medium- and heavy-duty trucks, which apply to vehicles from model years 2014 through 2018 (USEPA and NHTSA 2016). The USEPA and the NHTSA adopted standards for CO2 emissions and fuel consumption, respectively, tailored to each of three main vehicle categories: (1) combination tractors, (2) heavy-duty pickup trucks and vans, and (3) vocational vehicles. According to the USEPA, this program will reduce GHG emissions and fuel consumption for affected vehicles by 6 percent to 23 percent.

In August 2018, the USEPA and NHTSA issued a proposed ruling to roll back some of the fuel economy and GHG standards for medium- and heavy-duty trucks. The new ruling proposed by the USEPA and NHTSA, the Safer Affordable Fuel-Efficient (SAFE) Vehicle Rules, would replace the Corporate Average Fuel Economy (CAFE) standards set for model year 2022-2025 passenger car and light trucks, while the 2021 model year vehicles will maintain the CAFE standards. The ruling is split into two parts.

Part One, "One National Program" (84 Federal Register [FR] 51310), revokes a waiver granted by USEPA to the State of California under Section 209 of the CAA to enforce more stringent emission standards for motor vehicles than those required by USEPA for the explicit purpose of GHG reduction, and indirectly, criteria air pollutants and ozone precursor emission reduction. This revocation became effective on November 26, 2019, potentially restricting the ability of CARB to enforce more stringent GHG emission standards for new vehicles and set zero emission vehicle mandates in California.

Part Two addresses CAFE standards for passenger cars and light trucks for model years 2021 to 2026. This rulemaking proposes new CAFE standards for model years 2022 through 2026 and would amend existing CAFE standards for model year 2021. The proposal would retain the model year 2020 standards (specifically, the footprint target curves for passenger cars and light trucks) through model year 2026. The proposal addressing CAFE standards was jointly developed by NHTSA and USEPA, with USEPA simultaneously proposing tailpipe CO2 standards for the same vehicles covered by the same model years.

USEPA and NTHSA published final rules to amend and establish national CO_2 and fuel economy standards on April 30, 2020 (Part Two of the SAFE Vehicles Rule) (85 FR 24174). California and 22 other states are currently challenging this new rule in the court system, and it is reasonably foreseeable that the State will be successful in its legal challenges, for the reasons outlined in the State's lawsuit (State of California 2019) and on the CARB website (CARB 2021a). Furthermore, on January 20, 2021, President Biden signed an executive order directing the U.S. Government to revise fuel economy standards with the goal of further reducing emissions (White House 2021). In February 2021, the Biden Administration's Department of Justice also asked courts to put the litigation on hold while the administration "reconsidered the policy decisions of a prior administration." Most recently, on April 22, 2021, the Biden Administration proposed to formally roll back portions of the SAFE Rule thereby restoring California's right to enforce more stringent fuel efficiency standards.

Energy Independence and Security Act

On December 19, 2007, the Energy Independence and Security Act of 2007 (EISA) was signed into law (GPO 2007). Among other key measures, the EISA would do the following, which would aid in the reduction of national GHG emissions, both mobile and non-mobile:

- 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
- While superseded by NHTSA and USEPA 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."

State

Statewide GHG Reduction Targets and Scoping Plans

Executive Order S-3-05

Executive Order S-3-05, issued 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 CalEPA to report every two years on the State's progress toward meeting the Governor's GHG emission reduction targets. As a result of this executive order, the California Climate Action Team (CCAT), led by the Secretary of the CalEPA, was formed. The CCAT is made up of representatives from a number of State agencies and was formed to implement global warming emission reduction programs and reporting on the progress made toward meeting statewide targets established under the Executive Order. The CCAT reported several recommendations and strategies for reducing GHG emissions and reaching the targets established in the Executive Order (CalEPA 2006). The statewide GHG targets are as follows:

- By 2010, reduce to 2000 emission levels;
- By 2020, reduce to 1990 emission levels; and
- By 2050, reduce to 80 percent below 1990 levels.

However, with the adoption of the California Global Warming Solutions Act of 2006 (also known as Assembly Bill [AB] 32), discussed below, the Legislature did not adopt the 2050 horizon-year goal from

Executive Order No. S-3-05. In the last legislative session, the Legislature rejected legislation to enact the Executive Order's 2050 goal.[1]

The CCAT 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, transit-oriented development, and high-density residential/commercial development along transit corridors. These strategies develop more efficient land-use patterns within each jurisdiction or region to match population growth and workforce and socioeconomic needs for the full spectrum of the population. "Intelligent transportation systems" involve the application of advanced technology systems and management strategies to improve operational efficiency of transportation systems and the movement of people, goods, and service (CalEPA 2006).

Assembly Bill 32

The California Global Warming Solutions Act of 2006 (AB 32) was signed into law in September 2006 after considerable study and expert testimony before the Legislature. The law instructs CARB to develop and enforce regulations for the reporting and verifying of statewide GHG emissions. AB 32 directed CARB to set a GHG emission limit based on 1990 levels, to be achieved by 2020. AB 32 set a timeline for adopting a scoping plan for achieving GHG reductions in a technologically and economically feasible manner (Office of Legislative Counsel of California 2006a).

The heart of AB 32 is the requirement to reduce statewide GHG emissions to 1990 levels by 2020. AB 32 required CARB to adopt rules and regulations in an open public process to achieve the maximum technologically feasible and cost-effective GHG reductions. CARB accomplished the key milestones set forth in AB 32, including the following:

- June 30, 2007. Identification of discrete early action GHG emissions reduction measures. On June 21, 2007, CARB satisfied this requirement by approving three early action measures (CARB 2007a). These were later supplemented by adding six other discrete early action measures (CARB 2007b).
- January 1, 2008. Identification of the 1990 baseline GHG emissions level and approval of a statewide limit equivalent to that level and adoption of reporting and verification requirements

[1] The original version of SB 32 as introduced in the Legislature contained a commitment to the 2050 goal, but this commitment was not included in the final version of the bill. See: *https://leginfo.legislature.ca.gov/faces/billVersionsCompareClient.xhtml?bill_id=201520160SB32&cversion=20150SB3299INT.* In addition, the Supreme Court recently held in Cleveland National Forest Foundation et al. v San Diego Association of Governments (SANDAG)(S223603, July 13, 2017) that SANDAG did not abuse its discretion in declining to adopt the 2050 goal as a measure of significance in an analysis of the consistency of projected 2050 GHG emissions with the goals in Executive Order S-3-05.

concerning GHG emissions. On December 6, 2007, CARB approved a statewide limit on GHG emissions levels for the year 2020 consistent with the determined 1990 baseline (CARB 2007c).

- January 1, 2009. Adoption of a scoping plan for achieving GHG emission reductions. On December 11, 2008, CARB adopted *Climate Change Scoping Plan: A Framework for Change* (Scoping Plan) (CARB 2008).
- January 1, 2010. Adoption and enforcement of regulations to implement the "discrete" actions. Several early action measures have been adopted and became effective on January 1, 2010 (CARB 2007a; CARB 2007b).
- January 1, 2011. Adoption of GHG emissions limits and reduction measures by regulation. On October 28, 2010, CARB released its proposed cap-and-trade regulations, which would cover sources of approximately 85 percent of California's GHG emissions (CARB 2011b). CARB's Board ordered its Executive Director to prepare a final regulatory package for cap-and-trade on December 16, 2010 (CARB 2010).
- January 1, 2012. GHG emissions limits and reduction measures adopted in 2011 became enforceable.

As noted above, CARB adopted the Scoping Plan in 2008 to achieve the goals of AB 32. The Scoping Plan establishes an overall framework for the measures that will be adopted to reduce California's GHG emissions for various categories of emissions. CARB determined that achieving the 1990 emission level by 2020 would require an approximately 28.5 percent reduction of GHG emissions in the absence of new laws and regulations (referred to as "business as usual" or "No Action Taken"). The Scoping Plan evaluates opportunities for sector-specific reductions, integrates all CARB and Climate Action Team early actions and additional GHG reduction measures by both entities, and identifies additional measures to be pursued as regulations, and outlines the role of a cap-and-trade program. Key elements of the Scoping Plan include the following (CARB 2008):

- Expanding and strengthening existing energy efficiency programs as well as building and appliance standards;
- Achieving a statewide renewable energy mix of 33 percent;
- Developing a California cap-and-trade program that links with other Western Climate Initiative partner programs to create a regional market system and caps sources contributing 85 percent of California's GHG emissions;
- Establishing targets for transportation-related GHG emissions for regions throughout California, and pursuing policies and incentives to achieve those targets;

- Adopting and implementing measures pursuant to existing state laws and policies, such as California's clean car standards, goods movement measures, and the Low Carbon Fuel Standard; and
- Creating targeted fees, including a public goods charge on water use, fees on high global warming potential gases, and a fee to fund the administrative costs of the State of California's long-term commitment to AB 32 implementation.

In connection with the preparation of the environmental impact analyses (referred to as the Functional Equivalent Document [FED] and the Supplement to the FED) to support AB 32 Scoping Plan, CARB released revised estimates of the expected 2020 emission reductions in consideration of the economic recession and the availability of updated information from development of measure specific regulations. Incorporation of revised estimates in consideration of the economic recession reduced the projected 2020 emissions from 596 metric tons of CO_2 equivalent ($MTCO_2e$) to 545 million $MTCO_2e$ ($MMTCO_2e$) (CARB 2011c). Under this scenario, achieving the 1990 emissions level in 2020 would require a reduction of GHG emissions of 118 $MMTCO_2e$, or 21.7 percent. This revised reduction represents a 6.8 percentage point reduction from the 28.5 percent level determined in CARB's 2008 Scoping Plan. The 2020 AB 32 baseline was also updated to account for measures incorporated into the inventory, including Pavley (vehicle model-years 2009 to 2016) and the renewable portfolio standard (12 percent to 20 percent). Inclusion of these measures further reduced the 2020 baseline to 507 $MMTCO_2e$.

Senate Bill 32

In 2016, the Legislature passed Senate Bill (SB) 32 with the companion bill AB 197, which further requires California to reduce GHG emissions to 40 percent below 1990 levels by 2030. The bill targets reductions from the leading GHG emitters in the State. Transportation is the largest sector of GHG emissions in California and will be a primary subject for reductions. Through advances in technology and improved public transportation, the State plans to reduce GHG emissions from transportation sources to assist in meeting the 2030 reduction goal.

2017 Scoping Plan

CARB adopted the 2017 Scoping Plan in response to Executive Order B-30-15 and SB 32, which provides a framework for achieving the 2030 target. To meet reduction targets, the 2017 Scoping Plan relies on the continuation and expansion of existing policies and regulations, such as the Cap-and-Trade Program, as well as implementation of recently adopted policies and policies, such as SB 350 and SB 1383 (see below). The 2017 Scoping Plan increases emphasis on innovation, adoption of existing technology, and strategic investment to support its strategies. As with the 2013 Scoping Plan Update, the 2017 Scoping Plan does not provide project-level thresholds for land use development. Instead, it

recommends that local governments adopt policies and locally-appropriate quantitative thresholds consistent with a statewide per capita goal of six metric tons of CO_2e ($MTCO_2e$) by 2030 and two $MTCO_2e$ by 2050 (CARB 2017).

Executive Order B-55-18

On September 10, 2018, the governor issued Executive Order B-55-18, which established a new statewide goal of achieving carbon neutrality by 2045 and maintaining net negative emissions thereafter. This goal is in addition to the existing statewide GHG reduction targets established by SB 375, SB 32, SB 1383, and SB 100.

Cap-and-Trade Program

As mentioned above, the Scoping Plan identifies a cap-and-trade program as one of the strategies the State will employ to reduce GHG emissions that cause climate change. The cap-and-trade program is implemented by CARB and "caps" GHG emissions from the industrial, utility, and transportation fuels sections, which account for roughly 85 percent of the State's GHG emissions. The program works by establishing a hard cap on about 85 percent of total statewide GHG emissions. The cap starts at expected business-as-usual emissions levels in 2012 and declines two to three percent per year. Originally with a planning horizon of 2020, the recent approval of AB 398 in July 2017 extended the program until 2030. Fewer GHG emissions allowances are available each year, requiring covered sources to reduce their emissions or pay increasingly higher prices for those allowances. The cap level is set in 2030 to ensure California complies with SB 32's emission reduction target of 40 percent below 1990 GHG emission levels.

The scope of GHG emission sources subject to cap-and-trade in the first compliance period (2013-2014) includes all electricity generated and imported into California (the first deliverer of electricity into the State is the "capped" entity and the *one that* will have to purchase allowances as appropriate), and large industrial facilities emitting more than 25,000 $MTCO_2e$ per year (e.g., oil refineries and cement manufacturers). The scope of GHG emission sources subjected to cap-and-trade during the second compliance period (2015 onward) expands to include distributors of transportation fuels (including gasoline and diesel), natural gas, and other fuels. The regulated entity will be the fuel provider that distributes the fuel upstream (not the gas station). In total, the cap-and-trade program is expected to include roughly 350 large businesses, representing about 600 facilities. Individuals and small businesses will not be regulated.

Under the program, companies do not have individual or facility-specific reduction requirements. Rather, all companies covered by the regulation are required to turn in allowances[2] in an amount equal

[2] "Allowance" means a limited tradable authorization to emit up to one metric ton of carbon dioxide equivalent.

to their total GHG emissions during each phase of the program. The program gives companies the flexibility to either trade allowances with others or take steps to cost-effectively reduce emissions at their own facilities. Companies that emit more will have to turn in more allowances, and companies that can cut their emissions will have to turn in fewer allowances. Furthermore, as the cap declines, total GHG emissions are reduced. On October 20, 2011, CARB's Board adopted the final cap-and-trade regulation. The cap-and-trade program began on January 1, 2012, with an enforceable compliance obligation beginning with the 2013 GHG emissions (CARB 2015). In July 2017, the Legislature passed legislation to extend the cap-and-trade program to 2030 (Office of the Governor 2017).

Senate Bill 350

Adopted on October 7, 2015, SB 350 supports the reduction of GHG emissions from the electricity sector through a number of measures, including requiring electricity providers to achieve a 50 percent renewables portfolio standard by 2030, a cumulative doubling of statewide energy efficiency savings in electricity and natural gas by retail customers by 2030.

Senate Bill 1383

Approved by the governor in September 2016, SB 1383 requires the CARB to approve and begin implementing a comprehensive strategy to reduce emissions of short-lived climate pollutants. The bill requires the strategy to achieve the following reduction targets by 2030:

- Methane – 40 percent below 2013 levels
- Hydrofluorocarbons – 40 percent below 2013 levels
- Anthropogenic black carbon – 50 percent below 2013 levels

The bill also requires California Department of Resources Recycling and Recovery (CalRecycle), in consultation with the State board, to adopt regulations that achieve specified targets for reducing organic waste in landfills.

Senate Bill 97

Per SB 97, which was signed into law in 2007, the California Natural Resources Agency adopted amendments to the State CEQA Guidelines, which address the specific obligations of public agencies when analyzing GHG emissions under CEQA to determine a project's effects on the environment (codified as Public Resources Code [PRC] 21083.05). Specifically, PRC 21083.05 states, "[t]he Office of Planning and Research and the Natural Resources Agency shall periodically update the guidelines for the mitigation of greenhouse gas emissions or the effects of greenhouse gas emissions."

Senate Bill 375

In 2008, the California Legislature adopted SB 375, which (1) relaxes CEQA requirements for some housing projects that meet goals for reducing GHG emissions and (2) requires the regional governing bodies in each of the State's major metropolitan areas to adopt, as part of their regional transportation plan, sustainable community strategies that will meet the region's target for reducing GHG emissions. SB 375 creates incentives for implementing the sustainable community strategies by allocating federal transportation funds only to projects that are consistent with the emissions reductions.

Local governments are then to devise strategies for housing development, road-building and other land uses to shorten travel distances, reduce vehicular travel time and meet the new targets. If regions develop these integrated land use, housing, and transportation plans, residential projects that conform to the sustainable community strategy (and therefore contribute to GHG reduction) can have a more streamlined environmental review process.

Renewable Portfolio Standards (SB 1078, SB 107, SB X 1-2, and SB 100)

Established in 2002 under SB 1078, and accelerated in 2006 under SB 107,in 2011 under SB X 1-2, and again in 2018 under SB 100, California's Renewable Portfolio Standards (RPS) require retail sellers of electric services to increase procurement from eligible renewable energy resources to 33 percent of total retail sales by 2020, 44 percent by 2024, 52 percent by 2027, and 60 percent in 2030 (Office of Legislative Counsel of California 2002; Office of Legislative Counsel of California 2006b). Additionally, the State has made a commitment that renewable energy resources and zero-carbon resources supply 100 percent of all retail sales of electricity by 2045 (Office of Legislative Counsel of California 2018). Initially, the RPS provisions applied to investor-owned utilities, community choice aggregators, and electric service providers. SB X 1-2 added, for the first time, publicly-owned utilities to the entities subject to RPS.

Assembly Bill 1493

Mobile Source Reductions Assembly Bill 1493, the "Pavley Standard," required CARB to adopt regulations by January 1, 2005, to reduce GHG emissions from non-commercial passenger vehicles and light-duty trucks of model year 2009 through 2016. The bill also required the California Climate Action Registry to develop and adopt protocols for the reporting and certification of GHG emissions reductions from mobile sources for use by CARB in granting emission reduction credits. The bill authorizes CARB to grant emission reduction credits for reductions of GHG emissions prior to the date of enforcement of regulations, using model year 2000 as the baseline for reduction (CARB 2017b). In 2004, CARB applied to the USEPA for a waiver under the federal Clean Air Act to authorize implementation of these regulations. On June 30, 2009, the USEPA granted the waiver with the following provision: CARB may not hold a manufacturer liable or responsible for any noncompliance

caused by emission debits generated by a manufacturer for the 2009 model year. CARB has adopted a new approach to passenger vehicles (cars and light trucks), by combining the control of smog-causing pollutants and GHG emissions into a single coordinated package of standards. The new approach also includes efforts to support and accelerate the numbers of plug-in hybrids and zero-emission vehicles in California.

Low Carbon Fuel Standard (Executive Order S-01-07)

Executive Order S-01-07 (January 18, 2007) requires a 10 percent or greater reduction in the average fuel carbon intensity for transportation fuels in California regulated by CARB. CARB identified the Low Carbon Fuel Standard (LCFS) as a Discrete Early Action item under AB 32, and the final resolution (09-31) was issued on April 23, 2009 (CARB 2009). In 2009, CARB approved for adoption the LCFS regulation, which became fully effective in April 2010 and is codified at Title 17, California Code of Regulations (CCR), Sections 95480-95490. The LCFS reduced GHG emissions by reducing the carbon intensity of transportation fuels used in California by 10 percent between 2011 and 2020. In 2018, CARB approved amendments to LCFS regulations, 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 (CARB 2021b).

Advanced Clean Cars Program

In 2012, CARB approved the Advanced Clean Cars Program, a new emissions-control program for model year 2017 through 2025. The program combines the control of smog, soot, and GHGs with requirements for greater numbers of zero-emission vehicles. By 2025, when the rules will be fully implemented, the new automobiles will emit 34 percent fewer global warming gases and 75 percent fewer smog-forming emissions.

Senate Bill 743 (SB 743)

SB 743, adopted September 27, 2013, encourages land use and transportation planning decisions and investments that reduce vehicle miles traveled (VMT), which contribute to GHG emissions, as required by AB 32. Key provisions of SB 743 include reforming aesthetics and parking CEQA analysis for certain urban infill projects and eliminating the measurement of auto delay, including Level of Service (LOS), as a metric that can be used for measuring traffic impacts in transit priority areas. SB 743 requires the Governor's Office of Planning and Research (OPR) to develop revisions to the CEQA Guidelines establishing criteria for determining the significance of transportation impacts of projects within transit priority areas that promote the "…reduction of GHG emissions, the development of multimodal

transportation networks, and a diversity of land uses." It also allows OPR to develop alternative metrics outside of transit priority areas.

California Integrated Waste Management Act (AB 341)

The California Integrated Waste Management Act of 1989, as modified by AB 341, requires each jurisdiction's source reduction and recycling element to include an implementation schedule that shows: diversion of 25 percent of all solid waste by January 1, 1995, through source reduction, recycling, and composting activities; diversion of 50 percent of all solid waste on and after January 1, 2000; and diversion of 75 percent of all solid waste by 2020, and annually thereafter.

California Green Building Code (California Code of Regulations Title 24)

Although not originally aimed at reducing GHG emissions, CCR Title 24 Part 6: *California's Energy Efficiency Standards for Residential and Nonresidential Buildings* (Title 24), was first adopted in 1978 in response to a legislative mandate to reduce California's energy consumption. Since then, Title 24 has been amended to recognize that energy-efficient buildings require less electricity and reduce fuel consumption, which subsequently reduces GHG emissions. The current 2019 Title 24 standards were adopted, among other reasons, to respond to the requirements of AB 32. Specifically, new development projects constructed within California after January 1, 2019 are subject to the mandatory planning and design, energy efficiency, water efficiency and conservation, material conservation and resources efficiency, and environmental quality measures of the California Green Building Standards (CalGreen) Code (CCR Title 24, Part 11). Title 24 standards are updated triennially; the next update is scheduled to be adopted in 2022 and will take effect on January 1, 2023.

Regional

Southern California Association of Governments (SCAG)

On September 3, 2020, SCAG's Regional Council voted to approve and fully adopt the 2020-2045 Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS), also known as *Connect SoCal*. The 2020-2045 RTP/SCS builds upon the progress made through implementation of the 2016-2040 RTP/SCS and includes ten goals focused on promoting economic prosperity, improving mobility, protecting the environment, and supporting healthy/complete communities. The SCS implementation strategies include focusing growth near destinations and mobility options, promoting diverse housing choices, leveraging technology innovations, and supporting implementation of sustainability policies. The SCS establishes a land use vision of center focused placemaking, concentrating growth in and near Priority Growth Areas, transferring of development rights, urban greening, creating greenbelts and community separators, and implementing regional advance mitigation (SCAG 2020). Regional targets

intended to be addressed by the 2020-2045 RTP/SCS include reducing per capita GHG emissions from automobiles and light trucks for the SCAG region to 19 percent below 2005 levels.

The SCS technical report of the 2020-2045 RTP/SCS demonstrates the region's ability to attain and exceed the GHG emission reduction targets set forth by CARB; and outlines the region's plan for integrating the transportation network and related strategies with an overall land use pattern that responds to projected growth, housing needs, changing demographics, and transportation demands. The regional vision of the 2020-2045 RTP/SCS maximizes current voluntary local efforts that support the goals of SB 375. The 2020-2045 RTP/SCS emphasizes new housing and job growth in transit priority areas, livable corridors, high-quality transit areas, and neighborhood mobility areas in existing main streets, downtowns, and commercial corridors, resulting in an improved jobs-housing balance and more opportunity for transit-oriented development. This overall land use development pattern supports and complements the proposed transportation network, which emphasizes system preservation, active transportation, and transportation demand management measures.

SCAG's SCS provides specific strategies and tools for successful implementation. These include supporting projects that provide diverse housing choices, focusing growth near destinations and mobility options, leveraging technology innovations such as bike sharing and neighborhood electric vehicles, implementing congestion pricing, improvements to pedestrian infrastructure, and more. According to the Final Programmatic EIR for the 2020-2045 RTP/SCS, implementation of the RTP/SCS is anticipated to result in a 15.9 percent reduction in GHG emissions in the region below 2019 levels (SCAG 2019).

Local

GreenLA Climate Action Plan

The City of Los Angeles has issued guidance promoting sustainable development to reduce GHG emissions citywide in the form of a Climate Action Plan (CAP). The objective of GreenLA is to reduce GHG emissions 35 percent below 1990 levels by 2030 (City of Los Angeles 2007). GreenLA identifies goals and actions designed to make the City a leader in confronting global climate change. The measures would reduce emissions directly from municipal facilities and operations and create a framework to address citywide GHG emissions. GreenLA lists various focus areas in which to implement GHG reduction strategies. Focus areas include energy, water, transportation, land use, waste, port, airport, and ensuring that changes to the local climate are incorporated into planning and building decisions. City goals for each focus area are identified as follows:

Energy

- Increase the generation of renewable energy;
- Encourage the use of mass transit;
- Develop sustainable construction guidelines;
- Increase citywide energy efficiency; and
- Promote energy conservation.

Water

- Decrease per capita water use to reduce electricity demand associated with water pumping and treatment.

Transportation

- Power the city vehicle fleet with alternative fuels; and
- Promote alternative transportation (e.g., mass transit and rideshare).

Other Goals

- Create a more livable City through land use regulations;
- Increase recycling;
- Reduce emissions generated by activity associated with the Port of Los Angeles and regional airports;
- Create more city parks, promoting the environmental economic sector; and
- Adapt planning and building policies to incorporate climate change policy.

In order to provide detailed information on action items discussed in GreenLA, the City published an implementation document titled ClimateLA (City of Los Angeles 2008). ClimateLA presents the existing GHG inventory for the City, describes enforceable GHG reduction requirements, provides mechanisms to monitor and evaluate progress, and includes mechanisms that allow the plan to be revised in order to meet targets. By 2030, the plan aims to reduce GHG emissions by 35 percent from 1990 levels, which were estimated to be approximately 54.1 million metric tons.

Therefore, the City will need to lower annual GHG emissions to approximately 35.1 million metric tons per year by 2030. To achieve these reductions the City has developed strategies that focus on energy, water use, transportation, land use, waste, open space and greening, and economic factors. To reduce emissions from energy usage, ClimateLA proposes the following goals: increase the amount of renewable energy provided by the Los Angeles Department of Water and Power (LADWP); present a comprehensive set of green building policies to guide and support private sector development; reduce

energy consumed by City facilities and utilize solar heating where applicable; and help citizens to use less energy. With regard to waste, ClimateLA sets the goal of reducing or recycling 70 percent of trash by 2015. With regard to open space and greening, ClimateLA includes the following goals: create 35 new parks; revitalize the Los Angeles River to create open space opportunities; plant one million trees throughout the City; identify opportunities to "daylight" streams; identify promising locations for stormwater infiltration to recharge groundwater aquifers; and collaborate with schools to create more parks in neighborhoods.

City of Los Angeles Green Building Code

In 2010, the City adopted the 2010 CalGreen, with amendments, as Ordinance No. 181,480, thereby codifying provisions of CalGreen as the new Los Angeles Green Code (LA Green Code). As amended by Ordinance 184,692 in 2016, the LA Green Code was amended to incorporate by reference portions of the 2016 Edition of the CalGreen Code. The LA Green Code, as amended, contains both mandatory and voluntary green building measures for the reduction of GHG emissions through energy conservation. Among many requirements, the LA Green Code requires projects to incorporate infrastructure to support future electric vehicle supply equipment (EVSE), reduce the overall use of potable water by 20 percent, meet the applicable provisions of the California Energy Code, and comply with the construction and demolition solid waste handling and diversion requirements mandated in Section 66.32 of the Los Angeles Municipal Code, among other provisions.

City of Los Angeles Sustainable City pLAn

On April 8, 2015, Los Angeles released the Sustainable City pLAn, which covers a multitude of environmental, social, and economic sustainability issues related to greenhouse gas reduction either specifically or by association. Actionable goals include increasing the green building standard for new construction, creating a benchmarking policy for building energy use, developing "blue, green, and black" waste bin infrastructure, reducing water use by 20 percent, and possibly requiring LEED Silver or better certification for new construction (City of Los Angeles 2019b). In 2019, the Sustainable City pLAn was updated with new goals, targets, and actions through the Green New Deal pLAn, discussed further below.

Existing Buildings Energy and Water Efficiency (EBEWE) Ordinance

Effective in 2017, the EBEWE Ordinance makes public the annual energy and water consumption of all buildings over 20,000 square feet in the City. Beginning in 2017, privately owned buildings that are 20,000 square feet or more and buildings owned by the City that are 7,500 or more are required to be benchmarked, and owners must disclose annual energy and water consumption. Privately owned buildings that are 100,000 square feet or more must begin benchmarking reporting by December 1,

2017, and smaller buildings must begin reporting over the following two years. This Ordinance is designed to facilitate the comparison of buildings' energy and water consumption, and reduce building operating costs, leading to reduced GHG emissions.

Green New Deal pLAn

The City of Los Angeles adopted the Green New Deal pLAn (Green New Deal) in 2019, updating the Sustainable City pLAn with new, more ambitious goals. The Green New Deal sets the following targets for GHG reductions and sustainability in the City:

- Supply 55 percent renewable energy by 2025, 80 percent by 2036, and 100 percent by 2045
- Source 70 percent of water locally and capture 150,000 acre-feet per year of stormwater by 2035
- Reduce building energy use per square foot for all types of buildings 22 percent by 2025, 34 percent by 2035, and 44 percent by 2050
- Ensure that 57 percent of new housing units are built within 1,500 feet of transit by 2025, and 75 percent by 2035
- Increase the percentage of zero emissions vehicles in the city to 25 percent by 2025, 80 percent by 2035, and 100 percent by 2050
- Create 300,000 green jobs by 2035 and 400,000 by 2050
- Convert all city fleet vehicles to zero emission where technically feasible by 2028
- Reduce municipal GHG emissions 55 percent by 2025 and 65 percent by 2035 from baseline levels, reaching carbon neutral by 2045

The Green New Deal includes 445 actionable initiatives and partner initiatives for the reduction of GHG emissions. Initiatives include measures such as requiring the installation of solar panels on all newly built parking structures, groundwater remediation in basins that have been impacted by pollution, investments in public transit systems such as expansions of the Metro Purple Line, and an electric vehicle rebate program (City of Los Angeles 2019a).

City of Los Angeles General Plan

The City of Los Angeles does not have a General Plan Element specific to Global Warming and GHG emissions. However, the following goals and objectives from the Air Quality Element would also serve to reduce GHG emissions:

Goal 2	Less reliance on single-occupant vehicles with fewer commute and non-work trips.
Objective 2.1	Reduce work trips as a step towards attaining trip reduction objectives necessary to achieve regional air quality goals.
Objective 2.2	Increase vehicle occupancy for non-work trips by creating disincentives for single passenger vehicles, and incentives for high occupancy vehicles.
Goal 4	Minimal impact of existing land use patterns and future land use development on air quality by addressing the relationship between land use, transportation, and air quality.
Objective 4.2	Reduce vehicle trips and vehicle miles traveled associated with land use patterns.
Goal 5	Energy Efficiency through land use and transportation planning, the use of renewable resources and less-polluting fuels, and the implementation of conservation measures including passive methods such as site orientation and tree planting.
Objective 5.1	Increase energy efficiency of City facilities and private developments.
Objective 5.2	Have a portion of the City's service fleet be comprised of alternative fuel powered vehicles, subject to availability of funding, and practical feasibility.
Goal 6	Citizen awareness of the linkages between personal behavior and air pollution, and participation in efforts to reduce air pollution.
Objective 6.1	Make air quality education and citizen participation a priority in the City's effort to achieve clean air standards.

Mobility Plan 2035

Mobility Plan 2035, updated in September 2016, serves as the Mobility Element of the General Plan. Mobility Plan 2035 establishes new street designations, classifies each of the City's arterial streets and incorporates a "complete street" policy framework (i.e., the idea that transportation facilities should be designed for all types of users, including pedestrians, cyclists, and trucks, as well as passenger vehicles), thus providing a foundation for future policies and principles promoting residents' interaction with their streets. Discussed in detail in Section 4.10, *Land Use and Planning*, Mobility Plan 2035 also promotes equitable land use decisions that result in fewer vehicle trips by providing greater proximity and access to jobs, destinations, and other neighborhood services.

4.6.3 ENVIRONMENTAL IMPACTS

Thresholds of Significance

The following thresholds of significance were developed in accordance with State CEQA Guidelines, Appendix G. The Housing Element Update would have a significant impact with respect to GHGs and climate change if it would:

- Threshold 4.6-1: Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment
- Threshold 4.6-2: Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases

To answer the Appendix G questions above for the Housing Element Update, the City of Los Angeles will rely on the following project-specific threshold of significance to assess the environmental impacts associated with GHG emissions.

Consistency with SB 32 (including 2017 Scoping Plan), SB 375 (through demonstration of conformance with the 2020-2045 RTP/SCS), the Sustainable City pLAn and GreenLA

The basis for the project specific threshold is provided as follows. The City has not adopted specific GHG significance thresholds. SCAQMD has not adopted a GHG significance threshold for land use development projects, although it has adopted significance thresholds for industrial-type projects for which it is the lead agency (SCAQMD 2014). Those industrial thresholds are not relevant to the Housing Element Update, as the only projects for which the SCAQMD serves as the lead agency are those involving the adoption of air quality rules or regulations, or projects that have not gone through CEQA environmental review via another lead agency. No such projects would occur under implementation of the Proposed Project. In the absence of adopted thresholds for land use development projects based on SCAQMD guidance, the City has the discretion to use a significance threshold relevant to the Housing Element Update.

On November 30, 2015, the California Supreme Court issued an opinion on GHG significance thresholds for CEQA in the case Center for Biological Diversity et al. vs. California Department of Fish and Wildlife. The following discussion is paraphrased from that case, which assessed the use of GHG significance thresholds.

The Court stated that California air pollution control officials and air quality districts have made several proposals for numerical thresholds. Multiple agencies' efforts at framing GHG significance issues have not yet coalesced into any widely accepted set of numerical thresholds, but have produced

a certain level of consensus on the value of consistency with the state plans to meet GHG reduction targets as a criterion. The CARB Scoping Plan has not set out a method for CEQA analysis of GHG emissions from a proposed project. A 2007 CEQA amendment, however, required the preparation, adoption, and periodic update of guidelines for mitigation of GHG impacts. The resulting state direction was that a lead agency should attempt to describe, calculate or estimate the amount of GHG emissions a project will emit, but recognized that agencies have discretion in how to do so. The amendment provides that when assessing the significance of GHG emissions, the agency should consider these factors among others: (1) the extent to which the project may increase or reduce GHG emissions as compared to the existing environmental setting; (2) whether the project emissions exceed a threshold of significance that the lead agency determines applies to the project; and (3) 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. Such requirements must be adopted by the relevant public agency through a public review process and must reduce or mitigate the project's incremental contribution of greenhouse gas emissions. If there is substantial evidence that the possible effects of a particular project are still cumulatively considerable notwithstanding compliance with the adopted regulations or requirements, an EIR must be prepared for the project.

The Court also acknowledged that the scope of global climate change and the fact that GHGs, once released into the atmosphere, are not contained in the local area of their emission means that the impacts to be evaluated are global rather than local. For many air pollutants, the significance of their environmental impact may depend greatly on where they are emitted; for GHG, it does not. For projects that are designed to accommodate long-term growth in California's population and economic activity in a sustainable manner, such as the Housing Element Update, this fact gives rise to an argument that a certain amount of GHG emissions is as inevitable as population growth. Under this view, a significance criterion framed in terms of efficiency and conservation in land use (as compared to a business-as-usual [BAU] pattern of growth) is superior to a simple numerical threshold because CEQA is not intended as a population control measure.

This consideration favors consistency with statewide GHG reduction targets as a permissible significance criterion for project GHG emissions. Meeting statewide reduction goals does not preclude all new development. Rather, the Scoping Plan, the State's roadmap for meeting statewide GHG reduction targets, assumes continued growth and depends on increased efficiency and conservation in land use and transportation from all Californians. To the extent a project incorporates efficiency and conservation measures sufficient to contribute its portion of the overall GHG reductions necessary for the entire State, one can reasonably argue that its impact is not cumulatively considerable, because it would be helping to solve the cumulative problem of GHG emissions as envisioned by California law.

Given the reality of growth, some GHG emissions from new housing developments are inevitable. The critical CEQA question is the cumulative significance of a project's GHG emissions and, as discussed previously, from a climate change point of view it does not matter where in the State those emissions are produced. Under these circumstances, evaluating the significance of a project's GHG emissions with respect to their effect on the State's efforts to meet its long-term goals is a reasonable threshold.

The Supreme Court in *Center for Biological Diversity* recognized potential options for analyzing cumulative significance of a project's GHG emissions, including:

- Business-as-usual (BAU) Model. BAU comparison based on the Scoping Plan methodology if supported by substantial evidence that the metric used supports what level of reduction from business as usual a new land use development at the proposed location must contribute to comply with state goals.
- Consistency with AB 32's goal in whole or in part by looking at compliance with regulatory programs designed to reduce GHG; provided the project complies with or exceeds the regulations that were adopted by CARB, or state agencies to comply with Scoping Plan; and provided, the significance analysis only relates to impacts within the area governed by the regulation – e.g., reliance on Title 24 energy efficiency rules that are intended to reduce GHG from building would not address GHG impacts from transportation. And/or showing consistency with local GHG reduction plans, (e.g., climate action plan), to provide a basis for the tiering or streamlining of project-level CEQA analysis, including as consistent with CEQA Guidelines Section 15183.3.
- Relying on numerical thresholds for significance for GHG.

As discussed with in Regulatory Setting, Section 15064.4 was amended in 2019 to incorporate the holding in Center for Biological Diversity case as well as others. That section now directs lead agencies as follows:

> *§ 15064.4. Determining the Significance of Impacts from Greenhouse Gas Emissions.*
>
> *(a) The determination of the significance of greenhouse gas emissions calls for a careful judgment by the lead agency consistent with the provisions in section 15064. A lead agency shall make a good-faith effort, based to the extent possible on scientific and factual data, to describe, calculate or estimate the amount of greenhouse gas emissions resulting from a project. A lead agency shall have discretion to determine, in the context of a particular project, whether to:*
>
> *(1) Quantify greenhouse gas emissions resulting from a project; and/or*
>
> *(2) Rely on a qualitative analysis or performance based standards.*

(b) In determining the significance of a project's greenhouse gas emissions, the lead agency should focus its analysis on the reasonably foreseeable incremental contribution of the project's emissions to the effects of climate change. A project's incremental contribution may be cumulatively considerable even if it appears relatively small compared to statewide, national or global emissions. The agency's analysis should consider a timeframe that is appropriate for the project. The agency's analysis also must reasonably reflect evolving scientific knowledge and state regulatory schemes. A lead agency should consider the following factors, among others, when determining the significance of impacts from greenhouse gas emissions on the environment:

(1) The extent to which the project may increase or reduce greenhouse gas emissions as compared to the existing environmental setting;

(2) Whether the project emissions exceed a threshold of significance that the lead agency determines applies to the project.

(3) 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 greenhouse gas emissions (see, e.g., section 15183.5(b)). Such requirements must be adopted by the relevant public agency through a public review process and must reduce or mitigate the project's incremental contribution of greenhouse gas emissions. If there is substantial evidence that the possible effects of a particular project are still cumulatively considerable notwithstanding compliance with the adopted regulations or requirements, an EIR must be prepared for the project. In determining the significance of impacts, the lead agency may consider a project's consistency with the State's long-term climate goals or strategies, provided that substantial evidence supports the agency's analysis of how those goals or strategies address the project's incremental contribution to climate change and its conclusion that the project's incremental contribution is not cumulatively considerable.

(c) A lead agency may use a model or methodology to estimate greenhouse gas emissions resulting from a project. The lead agency has discretion to select the model or methodology it considers most appropriate to enable decision makers to intelligently take into account the project's incremental contribution to climate change. The lead agency must support its selection of a model or methodology with substantial evidence. The lead agency should explain the limitations of the particular model or methodology selected for use.

Based on the above legal standards, the City finds analyzing the Project's GHG emissions through consistency with the state's laws and programs to address climate change, including SB 32, SB 375, regional plans to address climate change consistent with state laws and plans, including the 2020-2045 RTP/SCS, and local plans, ordinances and policies to address climate change, including GreenLA and the Sustainable City pLAn, is the appropriate threshold.

Basis for Estimate of Project's GHG Emissions

As stated above, CEQA Guidelines, section 15064.4(a) states a lead agency shall make a good-faith effort, based to the extent possible on scientific and factual date, to describe and estimate the amount of greenhouse gas emissions resulting from a project. CEQA Guidelines, section 15064.4(c) states a lead agency may use a model or methodology to estimate greenhouse gas emissions resulting from the project and that the lead agency has the discretion to select the model or methodology is considers most appropriate to enable decision makers to intelligently take into account the project's incremental contribution to climate change.

Based upon this guidance, GHG emissions were quantified for the Proposed Project from construction and operation of build out of the RHNA using SCAQMD's California Emissions Estimator Model (CalEEMod) Version 2020.4.0. Operational emissions include both direct and indirect sources including mobile sources, water use, solid waste, area sources, natural gas, and electricity use emissions. CalEEMod is a statewide land use emissions computer model designed to provide a uniform platform for government agencies, land use planners, and environmental professionals to quantify potential criteria pollutant and GHG emissions associated with both construction and operations from a variety of land use projects. The model is considered by the SCAQMD to be an accurate and comprehensive tool for quantifying air quality and GHG impacts from land use projects throughout California.

Again, this analysis is not performed to measure the project's GHG impacts against a numerical threshold. The City does not have or use a numerical threshold for GHG or a methodology that relies on a quantitative analysis. Instead, the Proposed Project's GHG emissions are quantified and provided to comply with CEQA Guidelines, section 15064.4(a) and to provide evidence, to the extent possible, to show that the implementation of the plans, policies and regulations adopted to reduce GHG emissions will result in actual GHG reductions.

Methodology

As discussed in Section 3, *Project Description*, the Proposed Project is the development of 420,327 new housing units through 2029, which includes roughly 18.3 percent single-family and duplex (including ADUs), 50.3 percent multi-family, and 31.4 percent mixed use.

GHG emissions result from both direct and indirect sources. Direct emissions include emissions from fuel combustion in vehicles and natural gas combustion from stationary sources. Indirect sources include off-site emissions occurring as a result of electricity and water consumption and solid waste. In addition, construction activities would result in direct and indirect emissions.

This analysis focuses on impacts related to an inconsistency with a policy adopted for purposes of preventing or minimizing environmental impacts and is therefore based on consistency analyses with these policies.

Mobile Source Emissions

Mobile source emissions were estimated using vehicle activity data presented in Section 4.14, *Transportation*, and vehicle emission rates from CARB's EMFAC2017 model. As shown in Table 4.6-3, housing development accommodated would gradually increase vehicle trips and vehicle miles traveled (VMT); however, per capita and per service population would each diminish due to reduced trip lengths.

Table 4.6-3 Vehicle Activity Data for the Housing Element Update

Activity	Existing (2020)	No Project (2029)	With Project (2029)	Project vs. No Project (2029)
Vehicle Trips	17,547,267	18,548,326	18,418,177	-130,149 (-0.7%)
Vehicle Miles Traveled (VMT)	133,113,557	139,381,030	138,345,651	-1,035,379 (-0.7%)
VMT per capita	8.86	8.56	8.50	-0.65 (-0.8%)
VMT per Employment	12.19	11.21	11.12	-0.085 (-0.8%)
Source: Fehr & Peers 2021				

Energy Sources

Energy use emissions were calculated according to the methodology explained in Appendix A of the Calculation Details for CalEEMod. The energy use estimates are conservative since they do not account for potential energy efficiency measures required by subsequent Title 24 updates in 2022, 2025, and 2028.

Electricity emissions are calculated by multiplying the energy use times the carbon intensity of the utility district per kilowatt hour (California Air Pollution Control Officers Association [CAPCOA] 2021). The project would be served by Los Angeles Department of Water and Power (LADWP). Therefore, LADWP's specific energy intensity factors (i.e., the amount of CO_2, CH_4, and N_2O per kilowatt-hour) are used in the calculations of GHG emissions. The energy intensity factors included in CalEEMod are based on 2007 data. As of 2007, LADWP procured 8 percent of its electricity from renewable sources (LADWP 2007). Per SB 100, the statewide Renewable Portfolio Standard (RPS) Program requires electricity providers to increase procurement from eligible renewable energy sources to 60 percent by 2030; interim procurement targets are 44 percent by 2024 and 52 percent by 2027. As of 2019, LADWP procured 34 percent of its electricity from renewable sources (California Energy Commission [CEC] 2020). To account for the continuing effects of the RPS, the energy intensity factors

included in CalEEMod were reduced to reflect renewable energy procurement. LADWP energy intensity factors that include this reduction are shown in Table 4.6-4.

Table 4.6-4 LADWP Energy Intensity Factors

	2007 (lbs./MWh)	2019 (lbs./MWh)	2027 (lbs./MWh)	2030 (lbs./MWh)
Percent procurement	8%[1]	34%[2]	57%[3]	60%[4]
Carbon dioxide (CO_2)	1227.89	879.54	569.37	533.87
Methane (CH_4)	0.029	0.021	0.013	0.013
Nitrous oxide (N_2O)	0.006	0.004	0.003	0.003

lbs./MWh = pounds per megawatt-hour

[1] Source: LADWP Electric Outlook (LADWP 2007)

[2] Source: LADWP 2019 Power Content Label (CEC 2020)

[3] RPS procurement goals are 33 percent for 2020, 44 percent for 2024, 57 percent for 2027, and 60 percent for 2030. Therefore, power for 2029 must exceed 2027 procurement goals.

[4] 2030 RPS procurement goal is 60 percent.

Other Operational Emission Sources

Area source emissions related to existing and future demand for water, wastewater treatment and conveyance, solid waste disposal, and energy were obtained according to the methodology explained in Appendix A of the Calculation Details for CalEEMod. GHG emissions result from the energy use to supply, distribute, and treat water and wastewater, as well as from solid waste disposal by landfilling, recycling, or composting as methane and CO_2 gas is emitted in the process.

Construction

Construction-related GHG emissions would be a negligible percentage of total regional emissions when considering the emissions generated by mobile sources. As stated in the 2020-2045 SCAG RTP/SCS Final Programmatic EIR , construction-related emissions account for less than 0.3 percent of total regional emissions (SCAG 2020). Nevertheless, construction emissions are calculated and amortized over 30 years in accordance with SCAQMD recommendations. Assumptions in CalEEMod were developed based on surveys of construction sites. For projects that involve development of land uses that occupy more than 34 acres, CalEEMod extrapolates longer phase duration rather than increasing the estimated amount of equipment and number of workers. As such, emissions estimates were modeled for a project including 8 single-family units and 35 multi-family units and multiplied by a factor of 10,000. This is a slightly conservative estimate as it is estimating emissions from 80,000 single-family units and 350,000 multi-family units, and GHG construction emissions are amortized.

CalEEMod does not assume any export of demolition debris or any soil import/export from grading. As few vacant sites remain in the City, development accommodated under the Housing Element

Update would generally replace underutilized, low-density development. This analysis conservatively assumes demolition of existing buildings equal to one-half of the floor area of new development. Housing development typically balances grading cut and fill materials on-site to reduce costs; nonetheless, development accommodated under the Housing Element Update may include sites that require substantial grading. This analysis assumes an average cut depth of 10 feet for the area of the building footprint and that 25 percent of the cut soil would be exported. With these factors included, CalEEMod was used to conservatively estimate GHG emissions resulting from housing development accommodated under the Housing Element Update.

Project Impacts and Mitigation Measures

Threshold 4.6-1	Would the Housing Element Update be consistent with SB 32, SB 375 (through demonstration of conformance with the 2020-2045 RTP/SCS), the Sustainable City pLAn, and GreenLA?

Impact 4.6-1 The Housing Element Update would be consistent with SB 32, SB 375, the Sustainable City pLAn, and Green LA. Therefore, potential impacts related to GHG emissions would be ***less than significant***.

Consistency with Plans, Policies, and Regulations

SB 32 and 2017 Scoping Plan

On April 29, 2015, Governor Brown issued an executive order setting a statewide GHG reduction target of 40 percent below 1990 levels by 2030. SB 32, which codified Executive Order B-30-15, calls for Statewide reductions in GHG 40 percent below 1990 levels by 2030. In November 2017, CARB adopted a Climate Change Scoping Plan (2017 Scoping Plan) that addressed how long- term objectives could be met, including SB 32 targets in 2030. (Specifically, the 2017 Scoping Plan states that the Plan "establishes a path that will get California to its 2030 target" and "identifies how the State can reach our 2030 climate target to reduce…GHG emissions by 40 percent from 1990 levels." (2017 Plan at pp. 1).[3] Also, many of the emission reduction strategies recommended by CARB would serve to reduce the Project's post-2020 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 CARB's First Update to the AB 32 Scoping Plan.[4, 5]

[3] California Air Resources Board California's 2017 Climate Change Scoping Plan, https://ww2.arb.ca.gov/sites/default/files/classic//cc/scopingplan/scoping_plan_2017.pdf

[4] CARB, First Update, p. 4, May 2014. See also id. at pp. 32–33 [recent studies show that achieving the 2050 goal will require that the "electricity sector will have to be essentially zero carbon; and that electricity or hydrogen will have to power much of the transportation sector, including almost all passenger vehicles."]

[5] CARB, First Update, Table 6: Summary of Recommended Actions by Sector, pp. 94-99, May 2014.

The 2017 Scoping Plan and the SB 32 objectives that drive it involve 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. Although a number of these strategies are currently promulgated, some have not yet been formally proposed or adopted.

It is expected that these measures or similar actions to reduce GHG emissions will be adopted as required to achieve statewide GHG emissions targets. The 2017 Scoping Plan recommends that local agencies adopt policies to reduce VMT through land use and community design, transit-oriented development, street design policies that prioritize transit, biking and walking, and by increasing low carbon mobility choices. The Housing Element Update includes the following objectives and policies relevant to reducing VMT and GHG emissions:

Policy 1.1.6: Allocate citywide housing targets across Community Plan areas in a way that seeks to address patters of racial and economic segregation, promote jobs/housing balance, provide ample housing opportunities, and affirmatively further fair housing.

Policy 1.3.1: Prioritize housing capacity, resources, policies and incentives to include Affordable Housing in residential development, particularly near transit, jobs, and in Higher Opportunity Areas.

Policy 3.1.5: Develop and implement environmentally sustainable urban design standards and pedestrian centered improvements in development of a project and within the public and private realm such as shade trees, parkways and comfortable sidewalks.

Objective 3.2: Promote environmentally sustainable buildings and land use patterns that support a mix of uses, housing for various income levels and provide access to jobs, amenities, services and transportation options.

Policy 3.2.2: Promote new multi-family housing, particularly Affordable and mixed income housing, in areas near transit, jobs and Higher Opportunity Areas, in order to facilitate a better jobs-housing balance, help shorten commutes, and reduce greenhouse gas emissions.

Policy 3.2.4: Provide streamlining, incentives and flexibility to for residential buildings that promote energy and resource conservation particularly those that exceed existing green building standards.

Policy 3.2.5 Promote and facilitate reduction of water, energy, carbon and waste consumption in new and existing housing.

Policy 3.2.7 Provide environmentally sustainable development standards and incorporate sustainable best practice in building and zoning code updates.

Based on the analysis provided in Table 4.6-5 below, the Housing Element Update would be consistent with the State's Climate Change Scoping Plan's actions and strategies for reducing 2030 GHG emissions in accordance with SB 32.

GHG Emissions Generation

Housing development accommodated under the Housing Element would generate GHG emissions through the construction and operation of individual housing projects. GHG emissions would specifically arise from direct sources such as motor vehicles, natural gas consumption, solid waste handling/treatment, and indirect sources such as electricity generation.

Table 4.6-6 estimates 2029 emissions associated with the Housing Element Update. As discussed in Section 3, *Project Description*, the Housing Element Update would accommodate construction of housing in locations with good access to jobs, services, and high-quality public transit. Although the increase in housing would result in an increase in emissions of 1,089,803 $MTCO_2e$, the emission rate of 0.9 $MTCO_2e$ per service population supports the Housing Element Update is consistent with SB 32 and the 2017 Scoping Plan. As discussed in the Regulatory Setting, the 2017 Scoping Plan recommends that local governments adopt policies consistent with a statewide per capita goal of six metric tons of CO_2e ($MTCO_2e$) by 2030 and two $MTCO_2e$ by 2050. Based on SCAG Regional Growth Forecasts, the City is anticipated to have a population of approximately 4,342,487 persons and approximately 1,998,539 jobs in 2030; therefore, a 4.1 $MTCO_2e$ per service population[6,7] equates to a 6 $MTCO_2e$ per capita based on the City's anticipated population and job forecasts. A 0.9 $MTCO_2e$ per service population is well below a 4.1 $MTCO_2e$ per service population level, or approximately one quarter of the state per capita goal for 2030. This is not a threshold of significance. The State may need dense, urban cities like Los Angeles to reach much lower targets than other communities. However, the low per service area emission levels of the Housing Element Update coupled with the consistency analysis above supports that the Housing Element Update would be consistent with the State's Climate Change Scoping Plan's objective of reducing 2030 GHG emissions in accordance with SB 32.

[6] 6.0 $MTCO_2e$ * 4,342,487 persons = 26,054,922 $MTCO_2e$; 26,054,922 $MTCO_2e$ ÷ 6,341,026 SP = 4.1 $MTCO_2e$/SP.

[7] For comparison, consider that a 40 percent reduction (i.e., SB 32's emission reduction target for 2030) in SCAQMD's Tier 4 2020 efficiency targets would derive a 4.0 $MTCO_2e$ per service population target.

Table 4.6-5 Consistency Analysis – SB 32 and 2017 Scoping Plan

Actions and Strategies	Responsible	Project Consistency Analysis
Senate Bill 350 (SB 350) requires that the amount of electricity generated and sold to retail customers per year from eligible renewable energy resources be increased to 50 percent by 2030. • Increase RPS to 50 percent of retail sales 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. Reduce GHG emissions in the electricity sector through the implementation of the above measures as modeled in Integrated Resource Plans to meet GHG planning targets in the IRP. Load-serving entities and publicly-owned utilities meet GHG emission reductions through measures described in IRPs.	California Public Utilities Commission, California Energy Commission, CARB	Consistent. As Los Angeles Department of Water and Power (LADWP) would provide electricity service to the housing development accommodated by the RHNA, by 2030 the Project would use electricity consistent with the requirements of SB 350. It is assumed that LADWP will receive at least 33 percent of electricity from renewable sources by year 2020 and 50 percent by 2030. The Project would comply with CalGreen and Title 24 energy efficiency standards. Consistent. The Proposed Project complies as housing development accommodated by the Housing Element Update would be designed and constructed to meet the City's Green Building Code. *Consistent.* The Proposed Project complies as it would be designed and constructed to meet the City's Green Building Code for renovation and construction. Additionally, with Policies 3.1.5 and 3.2.4 and 3.2.5 that promote sustainable design and energy efficiency, the Proposed Project is consistent with these policies.
Senate Bill 100 (SB 100). The California Renewables Portfolio Standard Program (2018) requires a Statewide renewables energy portfolio that requires retail sellers to procure renewable energy that is at least 50 percent by December 31, 2026 and 60 percent by December 31, 2030. It would also require that local publicly owned electric utilities procure a minimum quantity of electricity from renewable energy resources achieve 44 percent of retail sales by December 31, 2024 and 60 percent by December 31, 2030.	LADWP, California Public Utilities Commission	Consistent. LADWP is required to generate electricity that would increase renewable energy resources to 33 percent by 2020 and 50 percent by 2030. It is completing a "100% Renewable Study" that will identify how it will achieve its ultimate 100 percent renewable energy goal. As LADWP would provide electricity service to the housing development accommodated by the Proposed Project, by 2030 the build out of the RHNA would use electricity consistent with the requirements of SB 100. The housing development accommodated by the Proposed Project would comply with this this action/strategy being located within the LADWP service area and would comply with CalGreen and Title 24 energy efficiency standards

Actions and Strategies	Responsible	Project Consistency Analysis
Implement Mobile Source Strategy (Cleaner Technology and Fuels) • 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 • Last Mile Delivery 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."	CARB, California State Transportation Agency, Southern California Gas, Caltrans California Energy Commission, Office of Planning and Research, Local agencies	Consistent. GHG emissions generated by vehicular travel related to the Proposed Project would benefit from proposed regulation, and mobile source emissions generated by the build out of the RHNA would be reduced with implementation of standards under the Advanced Clean Cars Program, consistent with reduction of GHG emissions under AB 32. Although the Innovative Clean Transit and Advanced Clean Local Truck Programs have not yet been established, the buildout of the RHNA development would also benefit from these measures once adopted. With regard to SB 375, the housing development accommodated by the Project will be in very large part infill development in an existing urbanized area that would concentrate more housing in an HQTA. Therefore, the Project would be consistent with SCAG's 2020-2045 RTP/SCS. Furthermore, the RTP/SCS would result in an estimated 19-percent decrease in per capita GHG emissions from passenger vehicles by 2035. As discussed below the Proposed Project is consistent with the 2020-2045 RTP/SCS.
Increase Stringency of SB 375 Sustainable Communities Strategy (2035 Targets)	CARB	Consistent. As discussed below, the Proposed Project would be consistent with SB 375. Although build out of the RHNA can occur anywhere existing land is zoned for residential use, the Rezoning Program will focus on transit corridors and areas near jobs, particularly in Higher Resource Areas. Most of the expected housing development will occur in HQTC and other areas served by transit.

Actions and Strategies	Responsible	Project Consistency Analysis
By 2019, adjust performance measures used to select and design transportation facilities. Harmonize project performance with emissions reductions, and increase competitiveness of transit and active transportation modes (e.g., via guideline documents, funding programs, project selection).	California State Transportation Agency and Southern California Gas, Office of Planning and Research, CARB, GoBiz, IBank, Department of Finance, California Transportation Commission, Caltrans	Not Applicable. The Project would not involve construction of transportation facilities. However, most of the housing development accommodated by the Proposed Project would be located in close proximity to ample transit opportunities, including Metro local routes and LADOT transit services. The access to active transportation infrastructure for both pedestrians and bicyclists will further reduce impacts to the transportation infrastructure in Downtown Los Angeles.
By 2019, develop pricing policies to support low-GHG transportation (e.g. low-emission vehicle zones for heavy duty, road user, parking pricing, transit discounts).	California State Transportation Agency, Caltrans, California Transportation Commission, Office of Planning and Research/Southern California Gas, CARB	Not Applicable. The Housing Element policies support development in sustainable ways, including with Policy 3.1.5 which encourages sustainable development and pedestrian centered improvements in the public and private realm.
Implement California Sustainable Freight Action Plan, including improving freight system efficiency. This includes deploying over 100,000 freight vehicles and equipment capable of zero emission operation and maximize zero and near-zero emission freight vehicles and equipment powered by renewable energy by 2030.	CARB	Not Applicable. The Proposed Project is to plan for housing development and would not interfere or impede the implementation of the Sustainable Freight Action Plan.
Adopt a Low Carbon Fuel Standard (LCFS) with a Carbon Index (CI) reduction of 18 percent.	CARB	Not Applicable. This regulatory program applies to fuel suppliers, not directly to land use development. GHG emissions related to vehicular travel associated with build out of the RHNA would benefit from this regulation because fuel used by vehicles trips associated with build out of the RHNA would be required to comply with LCFS. The current LCFS, adopted in 2007, requires a reduction of at least 10 percent in the carbon intensity (CI) of California's transportation fuels by 2020. On September 27, 2018, CARB amended the LCFS regulation to target a 20 percent reduction in CI from a 2010 baseline by 2030.

Actions and Strategies	Responsible	Project Consistency Analysis
Mobile		
Implement the Short-Lived Climate Pollutant Strategy by 2030: • 40 percent reduction in methane and hydrofluorocarbon emissions below 2013 levels. 50 percent reduction in black carbon emissions below 2013 levels.	CARB, CalRecycle, California Department of Food and Agriculture, California State Water Resources Control Board, Local air districts	Consistent. The housing development accommodated by the Housing Element Update would comply with the CARB Short-Lived Climate Pollutant (SLCP) Reduction Strategy, which limits the use of hydrofluorocarbons for refrigeration uses.
By 2019, develop regulations and programs to support organic waste landfill reduction goals in the SLCP and SB 1383.	CARB, CalRecycle, California Department of Food and Agriculture, California State Water Resources Control Board, Local air districts	Not Applicable. This strategy calls on regulators to reduce GHG emissions from landfills and is not applicable to a development project. Under SB 1383, the California Department of Resources Recycling and Recovery (CalRecycle) is responsible for achieving a 50 percent reduction in the level of statewide disposal of organic waste from the 2014 level by 2020 and 75-percent reduction by 2025.
Implement the post-2020 Cap-and-Trade Program with declining annual caps.	CARB	Not Applicable. This applies to State regulators and is not applicable to the Proposed Project. The current Cap-and-Trade program would end on December 31, 2020. Assembly Bill 398 (AB 398) was enacted in 2017 to extend and clarify the role of the state's Cap-and-Trade Program from January 1, 2021, 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.
By 2018, develop Integrated Natural and Working Lands Implementation Plan to secure California's land base as a net carbon sink: • Protect land from conversion through conservation easements and other incentives. • Increase the long-term resilience of carbon storage in the land base and enhance sequestration capacity.	California Natural Resources Agency and departments within, California Department of Food and Agriculture, CalEPA, CARB	Not Applicable. This applies to State regulators and is not applicable to the Proposed Project. This regulatory program applies to Natural and Working Lands, not directly related to housing development accommodated by the Proposed Project. However, the Project would not interfere or impede implementation of the Integrated Natural and Working Lands Implementation Plan.

Actions and Strategies	Responsible	Project Consistency Analysis
• Utilize wood and agricultural products to increase the amount of carbon stored in the natural and built environments. Establish scenario projections to serve as the foundation for the Implementation Plan.		
Solid Waste		
Establish a carbon accounting framework for natural and working lands as described in SB 859 by 2018	CARB	Not Applicable. This applies to State regulators and is not applicable to the Proposed Project. This regulatory program applies to Natural and Working Lands, not directly related to housing development accommodate by the Proposed Project. However, the Proposed Project would not interfere or impede implementation of the Integrated Natural and Working Lands Implementation Plan.
Water (Three percent of project inventory)		
Implement Forest Carbon Plan	California Natural Resources Agency, CAL FIRE, CalEPA and departments within	Not Applicable. This applies to State regulators and is not applicable to the Proposed Project. This regulatory program applies to state and federal forest land, not directly related to housing development accommodated by the Proposed Project. However, the Proposed Project would not interfere or impede implementation of the Forest Carbon Plan.
Source: CARB, California's 2017 Climate Change Scoping Plan, November 2017.		

Table 4.6-6 GHG Emissions under the Housing Element Update

Source	Forecasted Activity Level Increase Over No Project Condition (2029)	Forecasted 2029 GHG Emissions ($MTCO_2e$)
Transportation	-377.9 Million VMT/year	-115,750
Electricity	1,978 GWh/year[1]	339,841
Natural Gas	66.5 Million Therms/year[1]	356,915
Water Supply *Potable Water Supply* *Wastewater Treatment*	 44.7 Billion Gallons/year 17.3 Billion Gallons/year	131,481
Solid Waste	248 thousand tons	124,802
Other Area Sources[2]	--	124,973
Construction Emissions (Amortized)	--	127,541
Total	--	1,089,803
Residents[3]	1,168,509 persons	
Employment[4]	0 jobs	
Emissions Rate per Service Population	0.9 $MTCO_2e$/SP	

[1] Energy use estimates are conservative. Estimates do not account for potential energy efficiency measures required by subsequent Title 24 updates in 2022, 2025, and 2028.

[2] Other area sources include hearths and landscaping equipment.

[3] Calculated by multiplying the 2020 California Department of Finance average household size for the City of Los Angeles (2.78 persons per household) by potential development of 420,327 new residential units, which equates to approximately 1,168,509 persons.

[4] This analysis conservatively assumes that the Housing Element Update would result in a negligible number of new construction jobs and that housing would include a negligible number of home businesses.

Housing Development Typology Analysis

The types of housing units accommodated under the Housing Element Update would generally fall into five categories of development projects. A review of the housing development in the City in Table 4-2 shows that GHG impacts were less than significant and for each of the 54 developments reviewed and that no mitigation was required. The following discusses GHG impacts of these project types included in these respective analyses.

- Multi-family residential: Multi-family residential projects may range in size from small apartment buildings with 2-10 units to larger apartment buildings and high-rise structures with hundreds of units. Large multi-family development projects may have the potential to result in more substantial greater emissions, however multi-family residential is typically supports sustainable land use patterns that reduce per capita emissions. As listed in Table 4-2, the Hollywood and Wilcox Project is an example of a multi-family development that involved the construction of 260 multi-family residential dwelling units, up to 10 percent (26 units) of which would be set aside for workforce housing and 17,800 square feet of commercial uses, comprised of 11,020 square feet of retail, 3,580

square feet of office, and 3,200 square feet of restaurant uses. The EIR analysis determined that project design features would reduce GHG emissions by approximately 60 percent and that resulting emissions would be less than SCAQMD's applicable 3,000 $MTCO_2e$ screening level. No mitigation measures were required and GHG emissions impacts were less than significant.

- Single-family residential: Single-family residential projects may range in size and scale from smaller single-family homes to larger single-family homes, and from small-lot subdivisions to multi-property single-family subdivisions. Single-family developments typically generate greater emissions than multi-family residential due to greater trip lengths.

  For example, as listed in Table 4-2 the 32 Small Lot Homes Project, which involved the subdivision of a 4.3-acre site, grading, public improvements (roads, cub and gutters, retaining walls, driveways, private pocket parks, utilities, etc.), and construction of 32 single-family residences. The IS-MND analysis determined that GHG emissions would be less than significant.

- ADUs: ADUs include attached units that are physically connected to an existing structure, and detached units that are free-standing structures. ADUs may consist of new construction, additional construction, or conversion. ADUs support sustainable land use patterns by increasing density in existing neighborhoods, and GHG emissions associated with construction and operation of ADUs would be similar to single-family residences.

- Mixed use development: Mixed use development could range in size and scale from neighborhood commercial mixed use with smaller nonresidential components, to high-rise mixed-use with larger nonresidential components. Mixed use developments are conservatively considered to be similar to single-family residential, however typically result in even more sustainable land use patterns by encouraging non-automotive trip modes such as walking or bicycling.

  For example, as listed in Table 4-2 the Hollywood Center Project is a mixed-use development with a large multi-family residential component. Project VMT would be substantially reduced as compared to standard non-infill projects based on location efficiency and land use characteristics. Additionally, compliance with Title 24 Building Energy Standards, implementation of a transportation demand management program, and water conservation features would reduce emissions by 22 to 25 percent and would thereby demonstrate consistency with the State Scoping Plan. Impacts associated with GHG emissions and conflicts with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of GHGs were determined to be less than significant without mitigation.
- Conversion and/or rehabilitation: Existing nonresidential, residential and mixed use structures could be converted to residential uses under the Housing Element Update or rehabilitated to

accommodate new residential uses. Conversion and/or rehabilitation results in similar GHG emissions to other residential uses.

For example, as listed in Table 4-2, the Crossroads Hollywood Project is a mixed-use project that would rehabilitate Crossroads of the World and the former Hollywood Reporter Building, demolish or relocate all other existing buildings, and construct eight mixed-use buildings. As the project would involve high density infill development that includes below market rate housing, VMT would be substantially reduced as compared to traditional non-infill projects. Additionally, compliance with Title 24 Building Energy Standards, implementation of a transportation demand management program, and water conservation features such as water efficient landscaping would reduce emissions by 38 percent and would thereby demonstrate consistency with the State Scoping Plan. With implementation of regulatory requirements, Project Design Features, and a mitigation measure that was applied to a traffic impact, the GHG emissions impact were found to be less than significant.

SB 375 and SCAG's 2020-2045 RTP/SCS

Senate Bill (SB) 375 requires that each MPO prepare a Sustainable Communities Strategy (SCS) with the Regional Transportation Plan (RTP) that demonstrates how the region will meet greenhouse gas emissions targets. SB 375 establishes a collaborative relationship between MPOs and CARB to establish GHG emissions targets for each region in the state.

SCAG's 2020-2045 RTP/SCS was developed to provide a blueprint to integrate land use and transportation strategies to help achieve a coordinated and balanced regional transportation system. As discussed in State Regulatory Framework, SCAG's 2020 RTP/SCS is a regional plan intended to reduce per capita GHG emission from automobiles and light trucks for the SCAG region to 19 percent below 2005 levels. The SCS implementation strategies include focusing growth near destinations and mobility options, promoting diverse housing choices, leveraging technology innovations, and supporting implementation of sustainability policies.

The SCS focuses the majority of new housing and job growth in high-quality transit areas and other opportunity areas on existing main streets, in downtowns, and on commercial corridors, resulting in an improved jobs-housing balance and more opportunity for transit-oriented development. The underlying purpose of the Housing Element Update is to plan for and accommodate the RHNA compliant with State law and consistent with the City's General Plan.

As discussed in Section 3, *Project Description*, while some housing development accommodated by the Housing Element Update may occur anywhere existing housing is currently allowed, most housing development is anticipated to occur in higher-intensity commercial and mixed use districts, centers

and boulevards, and in proximity to transit. The Rezoning Program will prioritize housing in Transit Priority Areas and near major job centers, particularly Higher Resource areas.

Generally, projects are considered consistent with the provisions and general policies of applicable City and regional land use plans and regulations, such as SCAG's Sustainable Communities Strategy, if they are compatible with the general intent of the plans and would not preclude the attainment of their primary goals.

Based on the consistency analysis in Table 4.6-7 below, the Housing Element Update is consistent with SB 375 and the 2020-2045 RTP/SCS.

The City of Los Angeles GreenLA Climate Action Plan

The City of Los Angeles enacted its GreenLA Climate Action Plan (CAP) in 2007 to outline strategies for reducing the City's emissions of GHG and consequent effects on climate change. The CAP's primary long-term objective is to establish a framework for implementing GHG emissions reduction efforts that would achieve a goal of reducing citywide emissions to 35 percent below 1990 levels by 2030. With regard to planning, elements of the CAP designed to aid in regional GHG reductions include promotion of high-density housing close to major transportation arteries, implementation of transit-oriented development (TOD), and expanding availability of City land for housing, mixed-use development, parks, and open space. Although housing development would be located throughout the City, housing development accommodated under the Housing Element Update would be focused in urbanized areas of the City that are generally well-served by transit. Furthermore, implementation of the Housing Element Update would encourage pedestrian-friendly, mixed-use neighborhoods that would require less use of passenger vehicles. Together, these regulations encourage increased use of transit resources and support a shift in travel mode. The combination of these strategies is consistent with the goals of GreenLA.

The City of Los Angeles Sustainable City pLAn

The City's Sustainability City pLAn is the City's sustainability planning document that embraces both short- and long-term goals to improve equity, the City's economy, and the environment. Focus areas for the environmental aspect of the City's Sustainability City pLAn includes improving local water supply, increasing local electricity supply from solar, incentivizing energy efficient buildings, reducing atmospheric carbon, reducing waste destined for landfills, and embracing climate leadership. As discussed in the SB 32 and 2017 Scoping Plan consistency analysis, the Housing Element Update includes policies relevant to reducing GHG emissions, such as:

Table 4.6-7 Consistency Analysis – 2020-2045 RTP/SCS

Goals and Policies	Consistency Analysis
Goal 1: Encourage regional economic prosperity and global competitiveness	Consistent. Citywide Housing Priorities identified in the Housing Element Update supports regional economic prosperity by ensuring that the City: • Addresses the housing shortage, by increasing the production of new housing, particularly affordable housing; • Advances racial equity and provides greater access to opportunity, by proactively addressing racial and economic segregation in the city by creating housing opportunities that address historic patterns of discrimination and exclusion; • Prevents displacement, by protecting Angelenos – especially persons of color – from indirect and direct displacement, and ensuring stability of existing vulnerable communities; and • Promoting sustainability & resilience and environmental justice through housing, by designing and regulating housing to promote health and well-being, increasing access to amenities, contributing to a sense of place, fostering community and belonging, and protecting residents from existing and future environmental impacts. These Citywide Housing Priorities are reflected throughout the Goals, Objectives, Policies and Implementation Programs identified in the Housing Element Update. Therefore, the Proposed Project is consistent with Goal 1.
Goal 2: Improve mobility, accessibility, reliability, and travel safety for people and goods	Consistent. The Housing Element Update aims to promote mixed-use neighborhoods throughout the City, particularly in areas near existing and planned transit. Specifically, Objective 3.2 of the Housing Element Update aims to promote land use patterns that support a mix of uses, housing for various income levels, and provide access to jobs, amenities, services, and transportation options. An increase in mixed-use neighborhoods near transit would generally reduce the number of vehicular trips and VMT, and thus reduce air pollution from greenhouse gas emissions. See Section 4.2, *Air Quality*, and Section 4.14, *Transportation*, for the Project's impacts related to air quality emissions and VMT. In addition, the Housing Element Update includes several policies, including Policies 1.1.6, 1.3.1, 3.1.5, and 3.2.2, which are aimed at promoting a jobs/housing balance, growth near transit investments, and encouraging active transportation modes, such as bicycling and walking.

Goals and Policies	Consistency Analysis
Goal 5: Reduce greenhouse gas emissions and improve air quality.	Consistent. The Housing Element Update aims to promote mixed-use neighborhoods throughout the City, particularly in areas near existing and planned transit. Specifically, Objective 3.2 of the Housing Element Update aims to promote land use patterns that support a mix of uses, housing for various income levels, and provide access to jobs, amenities, services, and transportation options. An increase in mixed-use neighborhoods near transit would generally reduce the number of vehicular trips and VMT, and thus reduce air pollution from greenhouse gas emissions. See Section 4.2, *Air Quality*, and Section 4.14, *Transportation*, for the Project's impacts related to air quality emissions and VMT. In addition, the Housing Element Update includes several policies, including Policies 1.1.6, 1.3.1, 3.1.5, 3.2.2, 3.2.5 and 3.2.7, which are aimed at promoting a jobs/housing balance, planning for growth near transit investments, encouraging active transportation modes, and supporting sustainability and energy conservation in housing, all of which support goals to reduce GHG emissions and improve air quality.
Goal 6: Support healthy and equitable communities.	Consistent. The Housing Element Update aims to promote mixed-use neighborhoods throughout the City, particularly in areas near existing and planned transit. Goal 3 envisions a City in which housing creates healthy, livable, sustainable, and resilient communities and Policy 3.1.6 supports the creation of plans and development standards that promote positive health outcome for the most vulnerable communities and populations. Equity is also a core focus of the Housing Element Update: policy 1.1.10 provides support for the prioritization of underrepresented voices and communities of color in the City's planning engagement processes to result in more equitable outcomes, and policy 2.1.7 supports the development of localized anti-displacement strategies to accompany new transformative investments, including transit infrastructure.
Goal 7: Adapt to a changing climate and support an integrated regional development pattern and transportation network.	Consistent. The Housing Element Update aims to promote mixed-use neighborhoods throughout the City, particularly in areas near existing and planned transit. Specifically, Objective 3.2 of the Housing Element Update aims to promote environmentally sustainable buildings and land use patterns that support a mix of uses, housing for various income levels, and provide access to jobs, amenities, services, and transportation options. An increase in mixed-use neighborhoods near transit would generally reduce the number of vehicular trips and VMT, and thus reduce air pollution from greenhouse gas emissions. See Section 4.2, *Air Quality*, and Section 4.14, *Transportation*, for the Project's impacts related to air quality emissions and VMT. In addition, the Housing Element Update includes Object 3.3 which aims to promote disaster and climate resilience in citywide housing efforts. This is further supported by Policies 3.2.4, 3.2.5, 3.2.7 and 3.3.1.
Goal 9: Encourage development of diverse housing types in areas that are supported by multiple transportation options.	Consistent. The Housing Element Update aims to promote mixed-use neighborhoods throughout the City, particularly in areas near existing and planned transit. Specifically, Objective 3.2 of the Housing Element Update aims to promote land use patterns that support a mix of uses, housing for various income levels, and provide access to jobs, amenities, services, and transportation options.

Goals and Policies	Consistency Analysis
Goal 10: Promote conservation of natural and agricultural lands and restoration of habitats.	Consistent. As described above, housing development accommodated by the Proposed Project would primarily be located in higher-intensity commercial and mixed-use districts, centers and boulevards, and in proximity to transit. The Rezoning Program will prioritize housing in Transit Priority Areas and near major job centers, particularly Higher Resource areas. Policies included in the Housing Element Update would generally discourage the development of new housing in natural and agricultural lands. Objective 3.2 of the Housing Element Update aims to promote environmentally sustainable buildings and land use patterns that support a mix of uses, while Policy 3.2.7 specifically aims to provide sustainable development standards and incorporate sustainable best practice in building and zoning code updates. Additionally, Policy 3.1.7 promotes complete neighborhoods by planning for housing that includes open space and other amenities.
Guiding Principle 3: Assure that land use and growth strategies recognize local input, promote sustainable transportation options, and support equitable and adaptable communities.	Consistent. The Housing Element Update aims to promote mixed-use neighborhoods throughout the City, particularly in areas near existing and planned transit. Specifically, Objective 3.2 of the Housing Element Update aims to promote land use patterns that support a mix of uses, housing for various income levels, and provide access to jobs, amenities, services, and transportation options. An increase in mixed-use neighborhoods near transit would generally reduce the number of vehicular trips and VMT, and thus reduce air pollution from greenhouse gas emissions. See Section 4.2, *Air Quality*, and Section 4.14, *Transportation*, for the Project's impacts related to air quality emissions and VMT. In addition, the Housing Element Update includes several policies, including Policies 1.1.6, 1.3.1, 3.1.5, and 3.2.2, which are aimed at promoting a jobs/housing balance, growth near transit investments, and encouraging active transportation modes, such as bicycling and walking. Equity is also a core focus of the Housing Element Update: policy 1.1.10 provides support for the prioritization of underrepresented voices and communities of color in the City's planning engagement processes to result in more equitable outcomes, and policy 2.1.7 supports the development of localized anti-displacement strategies to accompany new transformative investments, including transit infrastructure.
Core Vision Topic 1: Sustainable Development Through our continuing efforts to better align transportation investments and land use decisions, we strive to improve mobility and reduce greenhouse gases by bringing housing, jobs and transit closer together.	Consistent. The Housing Element Update aims to promote mixed-use neighborhoods throughout the City, particularly in areas near existing and planned transit. Specifically, Objective 3.2 of the Housing Element Update aims to promote land use patterns that support a mix of uses, housing for various income levels, and provide access to jobs, amenities, services, and transportation options. An increase in mixed-use neighborhoods near transit would generally reduce the number of vehicular trips and VMT, and thus reduce air pollution from greenhouse gas emissions. See Section 4.2, *Air Quality*, and Section 4.14, *Transportation*, for the Project's impacts related to air quality emissions and VMT. In addition, the Housing Element Update includes several policies, including Policies 1.1.6, 1.3.1, 3.1.5, and 3.2.2, which are aimed at promoting a jobs/housing balance, growth near transit investments, and encouraging active transportation modes, such as bicycling and walking.

Goals and Policies	Consistency Analysis
Sustainable Community Strategy 1: Focus Growth Near Destinations and Mobility Options	
Sustainable Community Strategy 1a: Emphasize land use patterns that facilitate multimodal access to work, educational and other destinations. Sustainable Community Strategy 1b: Focus on a regional jobs/housing balance to reduce commute times and distances and expand job opportunities near transit and along center-focused main streets Sustainable Community Strategy 1c: Plan for growth near transit investments and support implementation of first/last mile strategies Sustainable Community Strategy 1e: Prioritize infill and redevelopment of underutilized land to accommodate new growth, increase amenities and connectivity in existing neighborhoods. Sustainable Community Strategy 1f: Encourage design and transportation options that reduce the reliance on number of solo car trips (this could include mixed uses or locating and orienting close to existing destinations).	Consistent. The Housing Element Update aims to promote mixed-use neighborhoods throughout the City, particularly in areas near existing and planned transit. Specifically, Objective 3.2 of the Housing Element Update aims to promote land use patterns that support a mix of uses, housing for various income levels, and provide access to jobs, amenities, services, and transportation options. An increase in mixed-use neighborhoods near transit would generally reduce the number of vehicular trips and VMT, and thus reduce air pollution from greenhouse gas emissions. See Section 4.2, *Air Quality*, and Section 4.14, *Transportation*, for the Project's impacts related to air quality emissions and VMT. In addition, the Housing Element Update includes several policies, including Policies 1.1.6, 1.3.1, 3.1.5, and 3.2.2, which are aimed at promoting a jobs/housing balance, growth near transit investments, and encouraging active transportation modes, such as bicycling and walking.
Sustainable Community Strategy 1g: Identify ways to "right size" parking requirements and promote alternative parking strategies (e.g., shared parking or smart parking).	Consistent. The Housing Element Update aims to promote mixed-use neighborhoods throughout the City, particularly by encouraging housing development in areas near existing and planned transit. Additionally, the Housing Element Update includes policies that support incentives and flexible zoning to encourage a range of housing types, including lower scale typologies (Policy 1.1.8), affordable housing (Policy 1.2.9), and innovative housing models that reduce the costs of housing production while also promoting broader Citywide Housing Priorities such as sustainability and resiliency (Policy 1.2.3). In addition, Policies 3.1.5 and 3.2.2, are aimed at promoting growth near transit investments and encouraging active transportation modes, such as bicycling and walking.

Goals and Policies	Consistency Analysis
Sustainable Community Strategy 2: Promote Diverse Housing Choices	
Sustainable Community Strategy 2a: Preserve and rehabilitate affordable housing and prevent displacement.	Consistent. The Housing Element Update includes an emphasis on the importance of housing preservation and anti-displacement. This is expressed as part of the Citywide Housing Priorities, to prevent displacement by protecting Angelenos – especially persons of color – from indirect and direct displacement, and ensuring stability of existing vulnerable communities. This is also supported by Goal 2, which aims to ensure a City that preserves and enhance the quality of housing and provides greater housing stability for households of all income levels. In particular, Objectives 2.1 and 2.2 support an expansion of renter protections, anti-displacement measures, and ownership retention strategies that have an emphasis on stability for underserved communities. Objective 2.3 provides support for the preservation of existing housing affordable housing. These goals and objectives are further supported by the following policies: 2.1.1, 2.1.2, 2.1.3, 2.1.4, 2.1.5, 2.1.6, 2.1.7, 2.1.8, 2.2.2, and 2.2.5.
Sustainable Community Strategy 2b: Identify funding opportunities for new workforce and affordable housing development.	Consistent. The Housing Element Update includes a number of Objectives and Policies to support the identification and development of new funding sources for workforce, moderate income, and affordable housing development that are needed to address the City's shortage of affordable homes. Relevant Objectives include Objectives 1.2 and 2.1 which aim to facilitate the production and preservation of Affordable Housing. This is further supported by Policies 1.2.7, 1.2.8, and 2.1.3.
Sustainable Community Strategy 2c: Create incentives and reduce regulatory barriers for building context-sensitive accessory dwelling units to increase housing supply.	Consistent. The Housing Element Update supports the development of a range of housing typologies to meet varying housing needs (Policy 1.2.2), including innovative housing models such as ADUs which reduce the costs of housing production (Policy 1.2.3) and more flexible zoning and incentives for existing lower density residential areas to create opportunities for more "missing middle" low-scale housing typologies (Policy 1.1.8).
Sustainable Community Strategy 2d: Provide support to local jurisdictions to streamline and lessen barriers to housing development that supports reduction of greenhouse gas emissions.	Consistent. The Housing Element Update would help to streamline production and reduce barriers to the production of equitable affordable housing and housing that meet underserved needs, such as those of the homeless population (i.e., Objectives 1.2 and 1.3). Furthermore, by focusing on development of multi-use neighborhoods near high-quality public transit, the Housing Element Update also promotes the reduction in vehicle trips and greenhouse gas emissions. In addition, the Housing Element includes policies to promote sustainability and resiliency in housing developments, further supporting reduction of GHG emissions. This is supported by the following policies: 1.1.9, 1.2.3, 1.2.5, 1.2.9, 1.3.1, 3.2.2, and 3.2.4.

Goals and Policies	Consistency Analysis
Sustainable Community Strategy 3: Leverage Technology Innovations	
Sustainable Community Strategy 3a: Promote low emission technologies such as neighborhood electric vehicles, shared rides hailing, car sharing, bike sharing and scooters by providing supportive and safe infrastructure such as dedicated lanes, charging and parking /drop off space. Sustainable Community Strategy 3b: Improve access to services through technology such as telework and telemedicine as well as other incentives such as a "mobility wallet", an app-based system for storing transit and other multi modal payments. Sustainable Community Strategy 3c: Identify ways to incorporate "micro-power grids" in communities, for example solar energy, hydrogen fuel cell power storage and power generation.	Consistent. The Housing Element Update would create sustainable mixed-use, mixed-income neighborhoods across the City and provide opportunities for housing, jobs, transit, and basic amenities for all segments of the population. Furthermore, Policy 3.2.7 under Objective 3.2 of the Housing Element Update aims to provide sustainable development standards and incorporate sustainable best practices in building and zoning code updates.
Sustainable Community Strategy 4: Support Implementation of Sustainability Policies	
Sustainable Community Strategy 4a: Pursue funding opportunities to support local sustainable development implementation projects that reduce greenhouse gas emissions. Sustainable Community Strategy 4b: Support statewide legislation that reduces barriers to new construction and that incentivizes development new transit corridors and stations. Sustainable Community Strategy 4c: Support local jurisdictions in the establishment of Enhanced Infrastructure Financing Districts (EIFDs), Community Revitalization and Investment Authorities (CRIAs), or other tax increment or value capture tools to finance sustainable	Consistent. Development accommodated by the Housing Element Update would be required to comply with energy efficiency lighting and light pollution reduction requirements included in the 2016 California Building Code, including the CALGreen Code, and the Los Angeles Building Code and Los Angeles Green Building Code (LAMC Chapter IX); the Los Angeles Building Code and Green Building Code largely incorporate and amend the 2013 California Building Code and CALGreen Code, respectively, For example, Subsection 99.05.106.8 of the Los Angeles Green Building Code sets restrictions on residential outdoor lighting, and Section 99.04.211.4 requires residences to be constructed with solar-ready features as specified in the California Energy Code. Furthermore, Policy 3.2.7 under Objective 3.2 of the Housing Element Update aims to provide sustainable development standards and incorporate sustainable best practices in building and zoning code updates

Goals and Policies	Consistency Analysis
infrastructure and development projects, including parks and open space. Sustainable Community Strategy 4d: Work with local jurisdictions/communities to identify opportunities and assess barriers to implement sustainability strategies. Sustainable Community Strategy 4e: Enhance partnerships with other planning organizations to promote resources and best practices in the SCAG region. Sustainable Community Strategy 4f: Continue to support long range planning efforts by local jurisdictions. Sustainable Community Strategy 4g: Provide educational opportunities to local decisionmakers and staff on new tools, best practices and policies relating to implementing the Sustainable Communities Strategy.	
Sustainable Community Strategy 5: Promote a Green Region	
Sustainable Community Strategy 5a: Support development of local climate adaptation and hazard mitigation plans, as well as project implementation that improves community resiliency to climate change and natural hazards. Sustainable Community Strategy 5b: Support local policies for renewable energy production, reduction of urban heat islands and carbon sequestration. Sustainable Community Strategy 5c: Integrate local food production into the regional landscape. Sustainable Community Strategy 5d: Promote more resource efficient development focus on conservation, recycling and reclamation.	Consistent. The Housing Element Update includes objectives, policies and implementation programs that would create sustainable mixed-use, mixed-income neighborhoods across the City and provide opportunities for housing and access to jobs, transit, and amenities (e.g., public parks) for all segments of the population. Housing development accommodated by the Housing Element Update be required to comply with energy efficiency lighting and light pollution reduction requirements included in the 2016 California Building Code, including the CALGreen Code, and the Los Angeles Building Code and Los Angeles Green Building Code (LAMC Chapter IX); the Los Angeles Building Code and Green Building Code largely incorporate and amend the 2013 California Building Code and CALGreen Code, respectively, For example, Subsection 99.05.106.8 of the Los Angeles Green Building Code sets restrictions on residential outdoor lighting, and Section 99.04.211.4 requires residences to be constructed with solar-ready features as specified in the California Energy Code. Objective 3.2 of the Housing Element Update aims to promote environmentally sustainable buildings and land use patterns that support a mix of uses, while Policy 3.2.7 specifically aims to provide sustainable development standards and incorporate sustainable best practice in building and zoning

Goals and Policies	Consistency Analysis
Sustainable Community Strategy 5e: Preserve, enhance and restore regional wildlife connectivity. Sustainable Community Strategy 5f: Reduce consumption of resource areas, including agricultural land. Sustainable Community Strategy 5g: Identify ways to improve access to public park space.	code updates. Additionally, Policy 3.1.7 promotes complete neighborhoods by planning for housing that includes open space and other amenities. Therefore, the project would reduce typical consumption of resources, including energy and water resources, and would support development of a green region.
Source: SCAG 2020-2045 RTP/SCS	

Policy 3.2.4: Provide streamlining, incentives and flexibility to for residential buildings that promote energy and resource conservation particularly those that exceed existing green building standards.

Policy 3.2.5 Promote and facilitate reduction of water, energy, carbon and waste consumption in new and existing housing.

Policy 3.2.7 Provide environmentally sustainable development standards and incorporate sustainable best practice in building and zoning code updates.

Based on the Housing Element Update policies identified above, the Housing Element Update is consistent with the sustainable development and construction goals in the Sustainable City pLAn.

The City of Los Angeles Green New Deal

The City's Green New Deal is the City's sustainability planning document. The Green New Deal sets targets for renewable energy procurement, water recycling and stormwater capture, building energy efficiency, siting new housing in proximity to transit, increased zero emission vehicle use, green jobs, and municipal GHG reductions.

The Housing Element Update would accommodate construction of housing in locations with good access to jobs, services, and high-quality public transit. As such, the Housing Element Update would result in sustainable land use patterns that reduce vehicle use and would be consistent with the City's Green New Deal targets for siting new housing in proximity to transit (57 percent within 1,500 feet of new transit by 2025 and 75 percent by 2035). Therefore, the Housing Element Update would not conflict with the City's Green New Deal.

Green Building Code

In addition, housing development accommodated by the Housing Element Update would be required to comply with the Los Angeles Green Building Code. The City's Green Building Code includes energy and water saving measures that reduce GHG emissions below 2013 Title 24 requirements. It promotes sustainable building practices by creating a series of requirements and incentives for developers to meet the U.S. Building Council's Energy and Design standards. The Green Building Code includes the following key mandatory measures for non-residential and high-rise residential buildings related to GHG reduction:

- Short-Term Bicycle Parking: If a development project is anticipated to generate visitor traffic, provide permanently anchored bicycle racks within 200 feet of the visitors' entrance, readily visible to passersby, for five percent of visitor motorized vehicle parking capacity, with a minimum of one two-bike capacity rack.

- Long-Term Bicycle Parking: For buildings with over 10 occupants, provide secure bicycle parking for five percent of motorized vehicle parking capacity, with a minimum of one space. Acceptable parking facilities shall be convenient from the street and may include:
    - Covered, lockable enclosures with permanently anchored racks for bicycles.
    - Lockable bicycle rooms with permanently anchored racks.
    - Lockable, permanently anchored bicycle lockers.
- Designated Parking: Provide designated parking, by means of permanent marking or a sign, for any combination of low-emitting, fuel-efficient, and carpool/van pool vehicles as described in Table 5.106.5.2 of the Green Building Code.
- Energy Conservation: Provide electric vehicle supply wiring for a minimum of five percent of the total number of parking spaces.
- Energy Conservation: A project must exceed the California Energy Code requirements, based on the 2008 Energy Efficiency Standards, by 15 percent using an Alternative Calculation Method approved by the California Energy Commission.
- Energy Conservation: Each appliance provided and installed shall meet Energy Star requirements if an Energy Star designation is applicable for that appliance.
- Renewable Energy: Provide future access, off-grid pre-wiring, and space for electrical solar systems.

Based on all of the above, the Housing Element Update would be consistent with the goals of SB 32 and the 2017 Scoping Plan, SB 375 and the 2020-2045 RTP/SCS, GreenLA and the Sustainable City pLAn, and future development projects within the Project Area would be required to comply with the City's Green Building Code. The Housing Element Update impacts associated with GHG emissions would be *less than significant*.

Mitigation Measures

No significant impact would occur; therefore, mitigation is not required.

Cumulative Impacts

The analysis above analyzes GHG emissions consistent with CEQA Guidelines, Section 15064.4(b) and considers whether the incremental contributions of the Housing Element Update could be cumulatively considerable. No further cumulative impact analysis is necessary.

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4.7 HAZARDS AND HAZARDOUS MATERIALS

This section addresses impacts associated with risk of upset related to hazardous materials, hazards to schools, the potential for housing development accommodated by the Housing Element Update to be located on listed hazardous materials site. Other hazards and hazardous materials issue areas were analyzed in the Initial Study for the Housing Element Update and impacts were found to be less than significant (see Appendix A). All impacts from the Safety Element related to Hazards and Hazardous Materials were found to be less than significant in the Initial Study and will not be discussed (Appendix A).

4.7.1 ENVIRONMENTAL SETTING

Hazardous Materials

The term "hazardous material" can have varying definitions for different regulatory programs. For the purpose of the Proposed Project, the term "hazardous materials" refers to both hazardous materials and hazardous waste. The California Health and Safety Code Section 25501(n)(1) defines hazardous materials as any material that "because of its quantity, concentrations, or physical or chemical characteristics, poses a significant present or potential hazard to human health and safety or to the environment if released into the workplace or the environment." Hazardous materials include but are not limited to hazardous substances, hazardous waste, and any material which a handler or the administering agency has a reasonable basis for believing would be injurious to the health and safety of persons or harmful to the environment if released into the workplace or environment.

A material is hazardous if it exhibits one or more of the following characteristics: toxicity, ignitability, corrosivity, and reactivity (Title 22, California Code of Regulations, Division 4.5, Chapter 11, Article 3, Section 66261.20-66261.24). These types of hazardous materials are defined below:

- **Toxic Substances.** Toxic substances may cause short-term or long-lasting health effects, ranging from temporary effects to permanent disability, or even death. For example, such substances can cause disorientation, acute allergic reactions, asphyxiation, skin irritation, or other adverse health effects if human exposure exceeds certain levels (the level depends on the substances involved and is chemical-specific). Carcinogens (substances that can cause cancer) are a special class of toxic substances. Examples of toxic substances include benzene (a component of gasoline and suspected carcinogen) and methylene chloride (a common laboratory solvent and a suspected carcinogen).
- **Ignitable Substances.** Ignitable substances are hazardous because of their ability to burn. Gasoline, hexane, and natural gas are examples of ignitable substances.

- **Corrosive Materials.** Corrosive materials can cause severe burns. Corrosives include strong acids and bases such as sodium hydroxide (lye) or sulfuric acid (battery acid).
- **Reactive Materials.** Reactive materials may cause explosions or generate toxic gases. Explosives, pure sodium or potassium metals (which react violently with water), and cyanides are examples of reactive materials.

Soil, soil vapor, and groundwater can become contaminated by hazardous material releases in a variety of ways, including permitted or illicit use and accidental or intentional disposal or spillage. Before the 1980s, most land disposal of chemicals was unregulated, with the result that numerous industrial properties and public landfills became dumping grounds for unwanted chemicals. The largest and most contaminated of these sites became Superfund sites, so named for their eligibility to receive cleanup money from a federal fund established under the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA; see *Regulatory Framework* for more details about CERCLA). The National Priorities List (NPL) is the list of national priorities among the known releases or threatened releases of hazardous substances, pollutants, or contaminants throughout the United States and its territories. The NPL is intended primarily to guide the USEPA in determining which sites warrant further investigation. Sites are added to the NPL following a hazard ranking system. As discussed further below, under "Hazardous Materials Sites," three NPL sites are located in the City.

Numerous smaller properties throughout Los Angeles have been designated as contaminated sites. Such types of sites include, but are not limited to, gas station sites where leaking underground storage tanks (LUSTs) were upgraded under a federal requirement in the late 1980s, dry cleaning facilities where tetrachloroethylene (PCE) was historically used as a dry-cleaning solvent, and former agricultural lands where residual impacts from use of organochlorine pesticides. Another category of sites that may have some overlap with the types already mentioned is "brownfields" – previously used, often abandoned, sites that because of actual or suspected contamination are undeveloped or underused. Both the USEPA and California Department of Toxic Substances Control (DTSC) maintain lists of known brownfields sites. These sites are often difficult to inventory due to their owners' reluctance to publicly label their property as potentially contaminated.

Asbestos Containing Materials

Asbestos is a naturally occurring fibrous material that was widely used in structures built between 1945 and 1978 for its fireproofing and insulating properties. Use of asbestos-containing materials (ACM) in construction materials was banned by USEPA between the early 1970s and 1991 under the authority of the federal Clean Air Act (CAA) and the Toxic Substances Control Act (TSCA) due to their harmful health effects. Exposure to asbestos increases risk of developing lung disease, such as lung cancer, mesothelioma

(a type of cancer), or asbestosis (a type of chronic, non-cancer lung disease) (USEPA 2017a). Common ACMs include vinyl flooring and associated mastic, wallboard and associate joint compound, plaster, stucco, acoustic ceiling spray, ceiling tiles, heating system components, and roofing materials. Commercial/industrial structures are affected by asbestos regulations if damage occurs or if remodeling, renovation, or demolition activities disturb ACMs. Since many of the structures in the City of Los Angeles were constructed before 1978, there is a potential for the presence of ACMs to exist in a wide variety of building materials in the City.

Lead and Lead-Based Paint

Lead is a naturally occurring metallic element. Because of its toxic properties, lead is regulated as a hazardous material. Excessive exposure to lead can result in the accumulation of lead in the blood, soft tissues, and bones. Children are particularly susceptible to potential lead-related health problems because it is easily absorbed into developing systems and organs. Lead can affect almost every organ and system in the body and can result in behavior and learning problems, lower IQ and hyperactivity, hearing problems, and anemia in children, and cardiovascular effects, decreased kidney function, and reproductive problems in adults (USEPA 2017b). Among its numerous uses and sources, lead can be found in paint, water pipes, solder in plumbing systems, and in soils around buildings and structures painted with lead-based paint (LBP). LBP was primarily used during the same time period as ACMs. Commercial/ industrial structures are affected by LBP regulations if the paint is in a deteriorated condition or if remodeling, renovation, or demolition activities disturb LBP surfaces. Since many structures in the City were constructed before 1978, there is potential for structures to contain paints and coatings with detectable or elevated concentrations of lead.

Polychlorinated Biphenyls (PCBs)

Polychlorinated Biphenyls (PCB) are mixtures of up to 209 individual chlorinated compounds. There are no known natural sources of PCBs. PCBs have been used as coolants and lubricants in transformers, capacitors, and other electrical equipment because they do not burn easily and are good insulators. The manufacture of PCBs was stopped in the United States in 1977 because of evidence that they build up in the environment and can cause a variety of harmful health effects. Health risks include cancer as well as non-cancer effects on the immune system, reproductive system, nervous system, endocrine system, such as a decrease in the size of the thymus gland, decreased birth weight and gestational age for children born to women exposed to PCBs, and decreased thyroid hormone levels (USEPA 2017c). Products made before 1977 that may contain PCBs include fluorescent lighting fixtures and electrical devices containing PCB capacitors and old microscope and hydraulic oils.

Organochlorine Pesticides (OCPs)

Agricultural practices contribute to a number of environmental impacts, including the use of organochlorine pesticides (OCPs) and herbicides that contain toxic chemicals. The term pesticide covers a wide range of compounds including insecticides, fungicides, herbicides, rodenticides, molluscicides, nematicides, plant growth regulators and others (Aktar et al. 2009). OCPs have a history of widespread use in the United States, primarily between the 1940s and 1970s (DTSC 2010). Although most OCPs were banned or withdrawn from use in the 1970s, these compounds persist in the environment today. OCPs are typically found in surface soils associated with historical agricultural uses. A wide range of chronic and acute health effects have been associated with exposure to OCPs, including, but not limited to, neurological impacts, birth defects, and cancer (Biomonitoring California 2012). OCPs in soil have been encountered in approximately 15 percent of all sites addressed by DTSC's Brownfields and Environmental Restoration Program (DTSC 2010).

Volatile Organic Compounds (VOCs)

VOCs have been used extensively in the United States since the 1940s. VOCs are common components or additives in many commercial and household products, including gasoline, diesel fuel, other petroleum-based products, carpets, paints, varnishes, glues, spot removers, and cleaners. Industrial uses include the manufacturing of automobiles, electronics, computers, wood products, adhesives, dyes, rubber products, and plastics, and VOCs are used in the synthesis of other organic compounds. VOCs are also used in dry cleaning, refrigeration units, and the degreasing of equipment and home septic systems. VOCs are present in some personal care products such as perfumes, deodorants, insect repellents, skin lotions, and pharmaceuticals. Some VOCs also have been applied as fumigants in agriculture and in households to control insects, worms, and other pests (USEPA 2019).

Existing Conditions

Hazardous Materials Sites

The locations where hazardous materials are used, stored, treated and/or disposed of comes to the attention of regulatory agencies through various means, including licensing and permitting, enforcement actions, and anonymous tips. To the extent possible, the locations of these businesses and operations are recorded in several database lists maintained by various State, federal, and local regulatory agencies. In some cases, businesses that use hazardous materials in quantities greater than certain established thresholds are required to file business plans with the Los Angeles Fire Department. Other businesses that engage in the transport, storage, treatment, or disposal of hazardous materials are required to maintain detailed records of all their hazardous materials-related activities. Federal, State, and local agencies enforce regulations

applicable to hazardous waste generators and users, and the Los Angeles County Fire Department Health Hazardous Materials Division tracks and inspect hazardous materials handlers to ensure appropriate reporting and compliance.

Permitted uses of hazardous materials include those facilities that use hazardous materials or handle hazardous wastes in accordance with current hazardous materials and hazardous waste regulations. The use and handling of hazardous materials from these sites is considered low risk, although there can be instances of unintentional chemical releases. In such cases, the site would be tracked in the environmental databases as an environmental case. Permitted sites without documented releases are, nevertheless, potential sources of hazardous materials in the soil and/or groundwater (compared to sites where there are no hazardous materials used or stored) because of accidental spills, incidental leakage, or spillage that may have gone undetected. Many of the facilities are permitted for more than one hazardous material use and, therefore, could appear in more than one database.

The potential to encounter hazardous materials in soil and groundwater in the City is generally based on a search of federal, State, and local regulatory databases that identify permitted hazardous materials uses, environmental cases, and spill sites. The DTSC EnviroStor database contains information on properties in California where hazardous substances have been released or where the potential for a release exists. The California State Water Resources Control Board (SWRCB) GeoTracker database contains information on properties in California for sites that require cleanup, such as LUST sites, which may impact, or have potential impacts, to water quality, with emphasis on groundwater.

According to databases of hazardous material sites maintained by the DTSC (EnviroStor) and the SWRCB (GeoTracker), the City of Los Angeles has hundreds of the following types of hazardous sites that are still active or need further investigation: LUST Cleanup sites, Cleanup Program sites, military cleanup sites, Waste Discharge Requirements (WDR) sites, federal Superfund sites, school investigation sites, voluntary cleanup sites, corrective action sites, evaluation sites, and state response sites. These sites are dispersed throughout the City. Many of these sites are at existing and former gas stations, industrial facilities, dry cleaners, or former agricultural lands. Appendix E includes Figure 4.7-1a through Figure 4.7-1jj which show the hazardous waste sites within each Community Plan Area throughout the City.

Three NPL sites are located within the City of Los Angeles, including Del Amo, San Fernando Valley Area 1, and San Fernando Valley Area 4. The Del Amo NPL Site is a 280-acre site at the former location of a synthetic rubber manufacturing plant that was operational between 1943 and 1972 (USEPA 2021a). Groundwater, soil, and soil vapor are known to be impacted at the Del Amo site. Contaminants associated with the Del Amo site include VOCs such as benzene and ethylbenzene, and polycyclic aromatic

hydrocarbons (PAHs) such as naphthalene, benzopyrene, pananthrene, and chrysene. Cleanup, operation and maintenance, and monitoring activities are ongoing at the Del Amo site.

The San Fernando Valley Area 1 site is a 12,800-acre area where groundwater is known to be contaminated and is located primarily in North Hollywood and Burbank. The San Fernando Valley Area 4 site is a 5,860-acre area of contaminated groundwater in Los Angeles. Numerous potentially responsible parties contributed to contaminated groundwater in the Areas 1 and 4 with VOCs, including trichloroethylene (TCE) and PCE (USEPA 2021b). Cleanup and investigative activities are ongoing at the San Fernando Valley Areas 1 and 4 sites.

Figure 4.7-1a Hazardous Waste Sites in the Arleta-Pacoima Community Plan Area

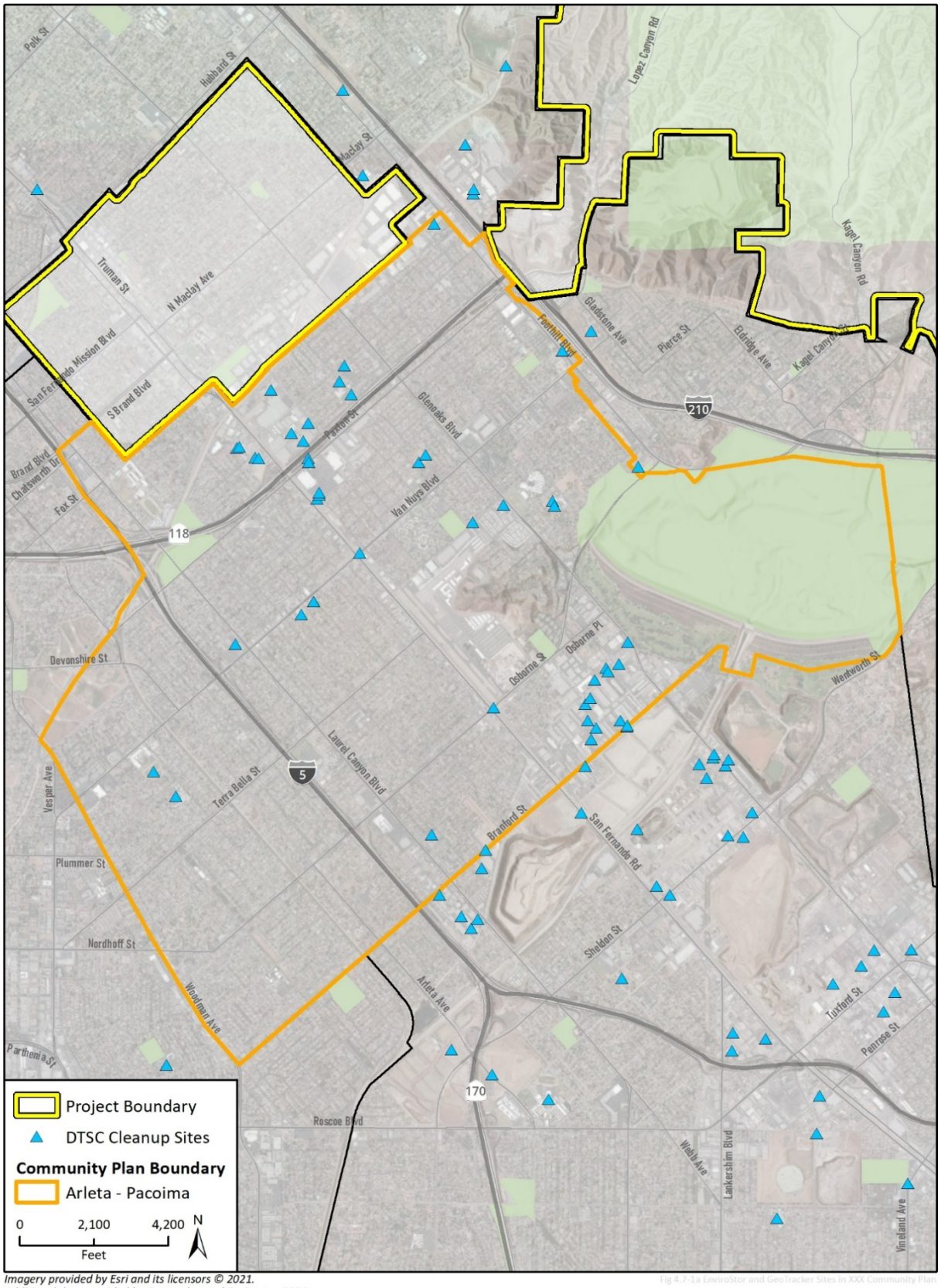


Figure 4.7-1b Hazardous Waste Sites in the Boyle Heights Community Plan Area

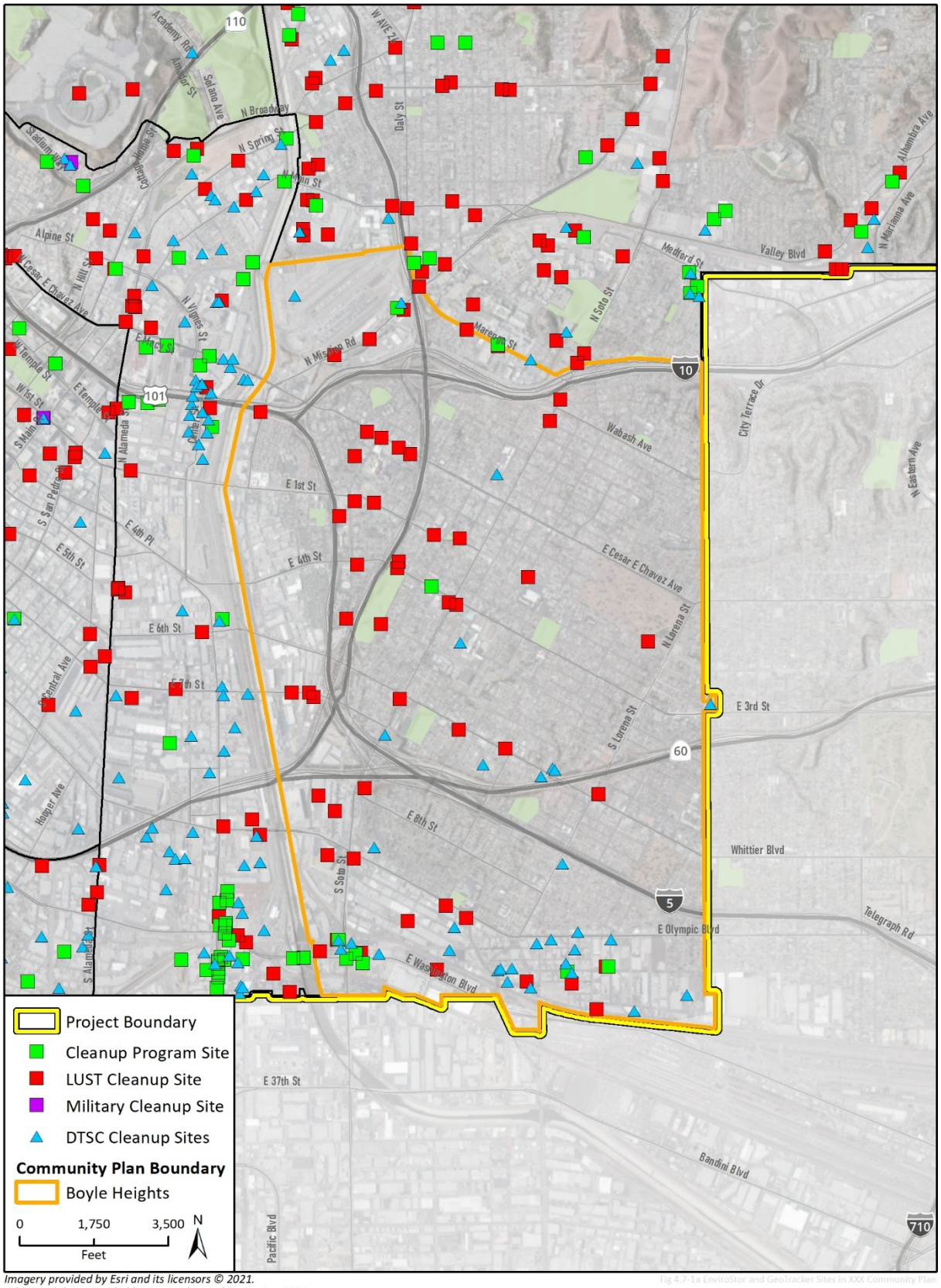
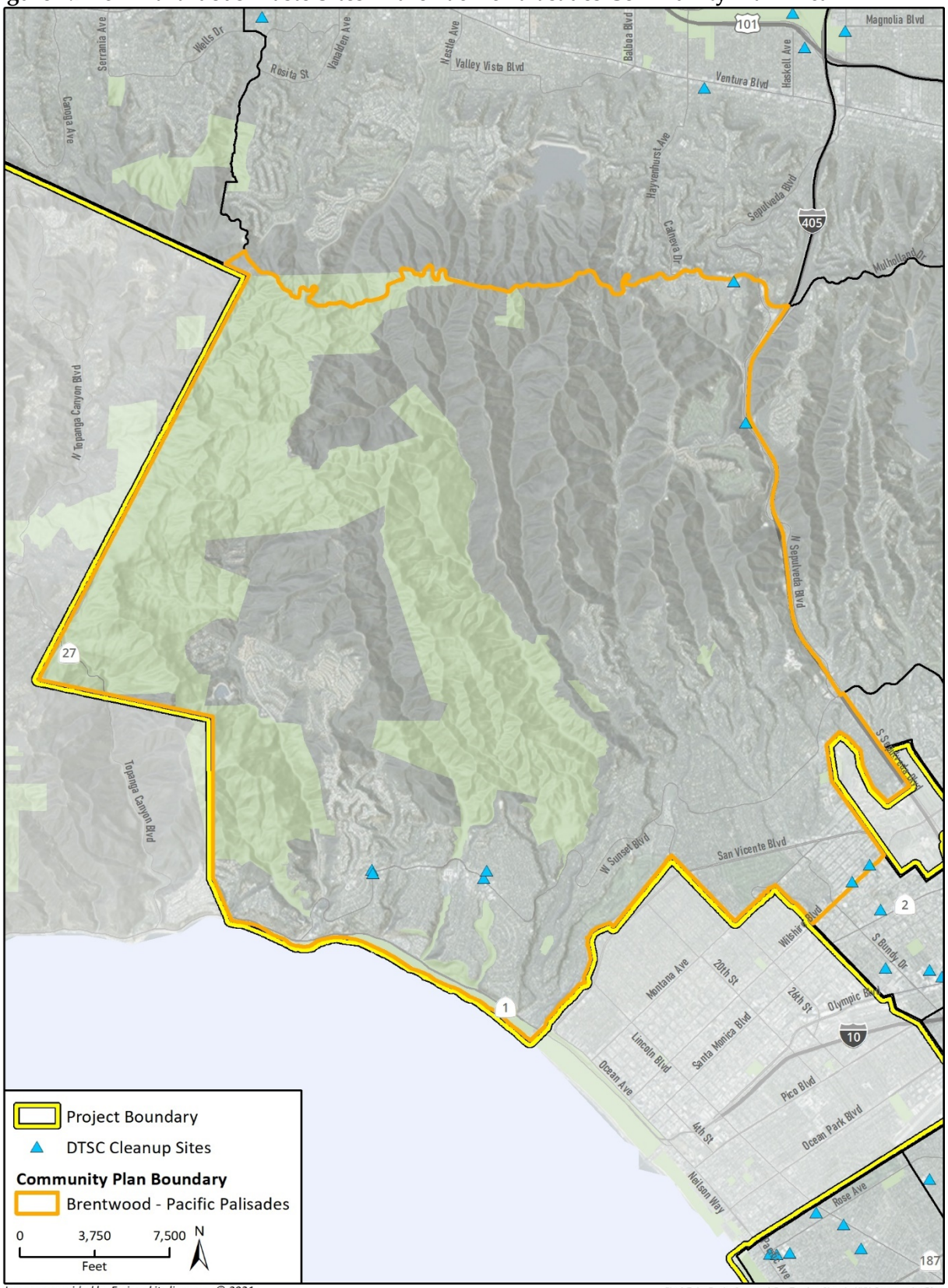


Figure 4.7-1c Hazardous Waste Sites in the Pacific Palasades Community Plan Area



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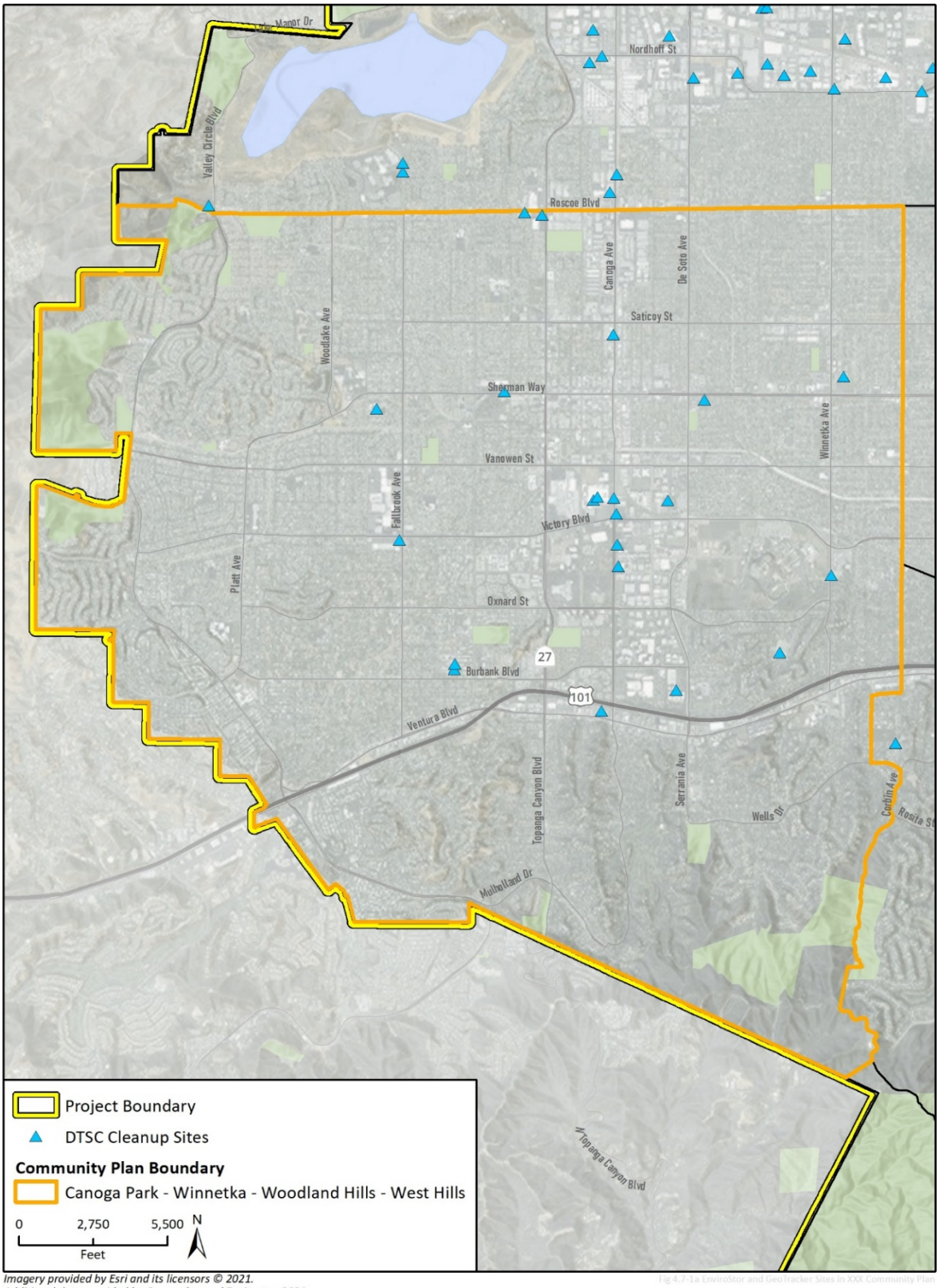
Additional data provided by Geotracker and Envirostor, 2021.

Fig 4.7-1a EnviroStor and GeoTracker Sites in XXX Community Plan

Figure 4.7-1d Hazardous Waste Sites in the Canoga Park – Winnetka – Woodland Hills – West Hills Community Plan Area



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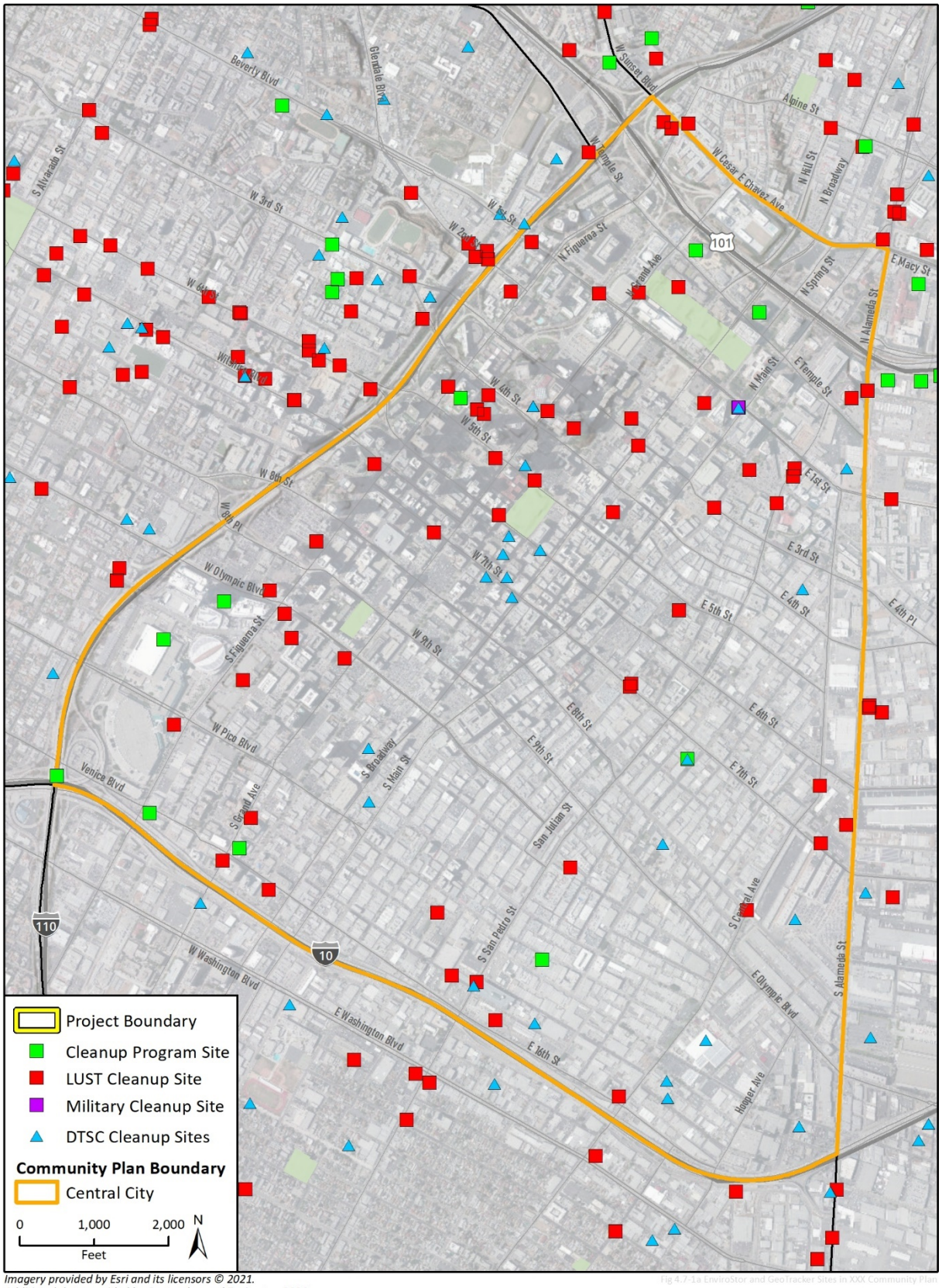
Additional data provided by Geotracker and Envirostor, 2021.

Fig 4.7-1a EnviroStor and GeoTracker Sites in XXX Community Plan

Figure 4.7-1e Hazardous Waste Sites in the Central City Community Plan Area



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Additional data provided by Geotracker and Envirostor, 2021.

Fig 4.7-1a EnviroStor and GeoTracker Sites in XXX Community Plan

Figure 4.7-1f Hazardous Waste Sites in the Central City North Community Plan Area

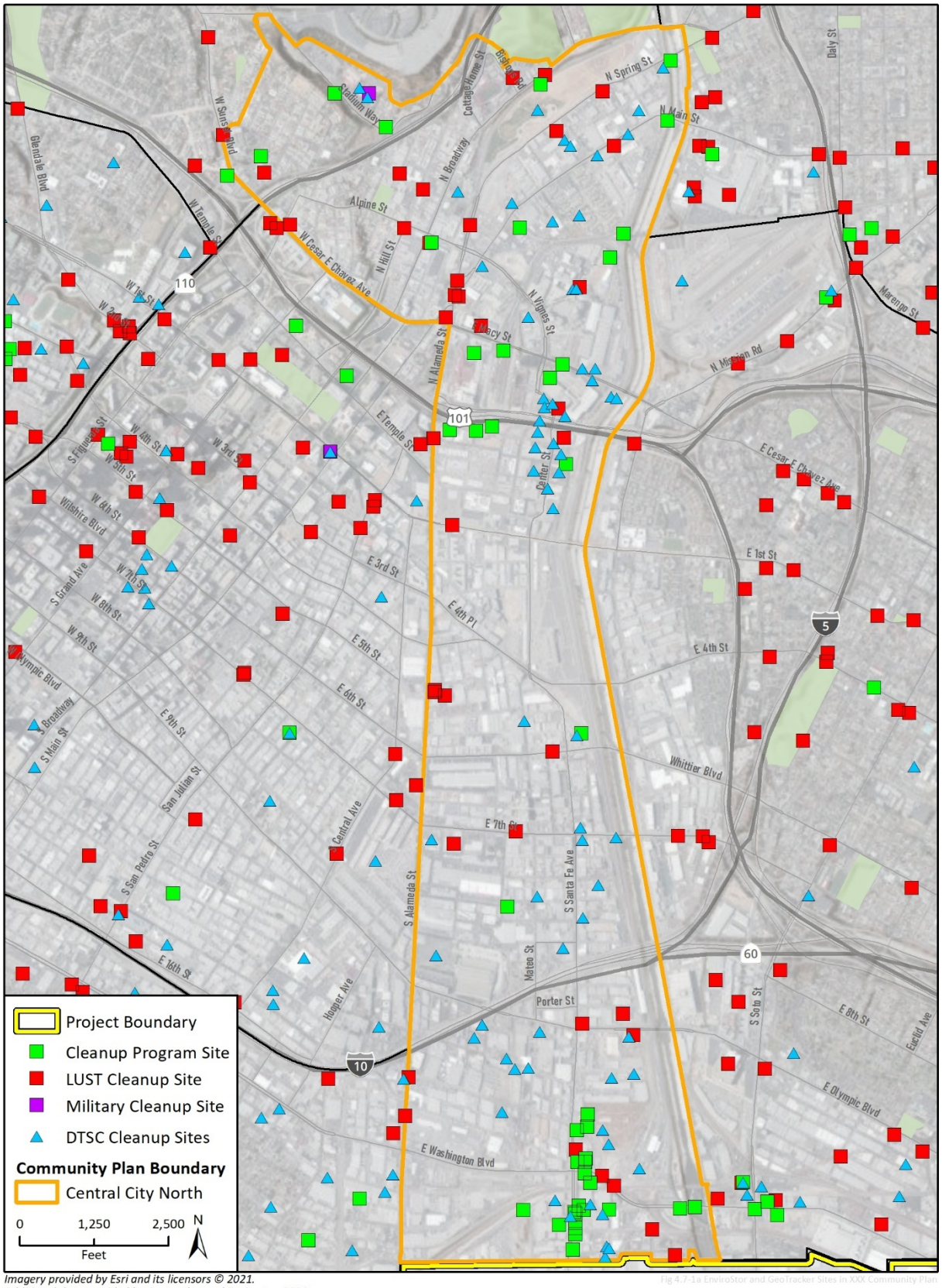
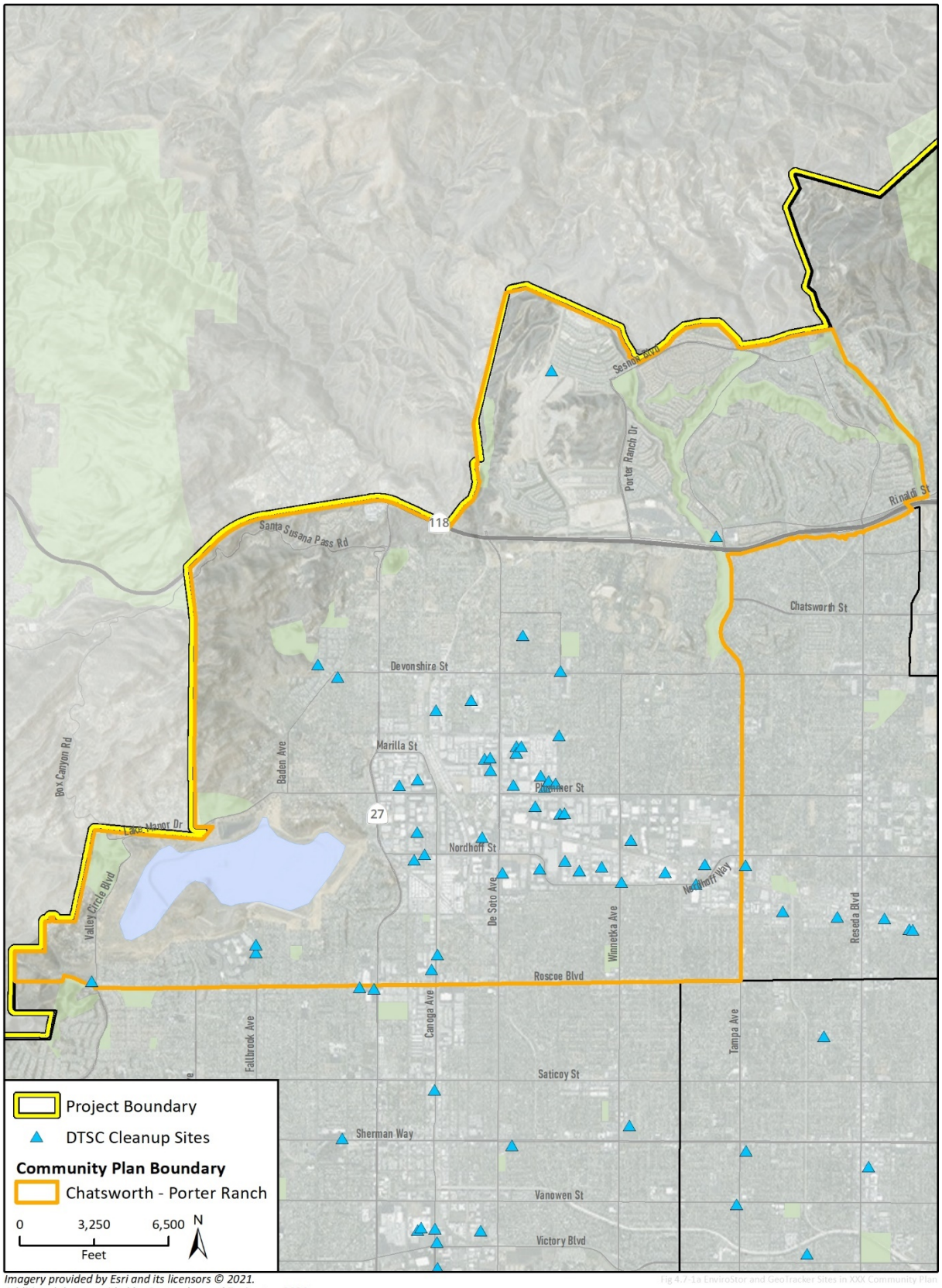


Figure 4.7-1g Hazardous Waste Sites in the Chatsworth – Porter Ranch Community Plan Area



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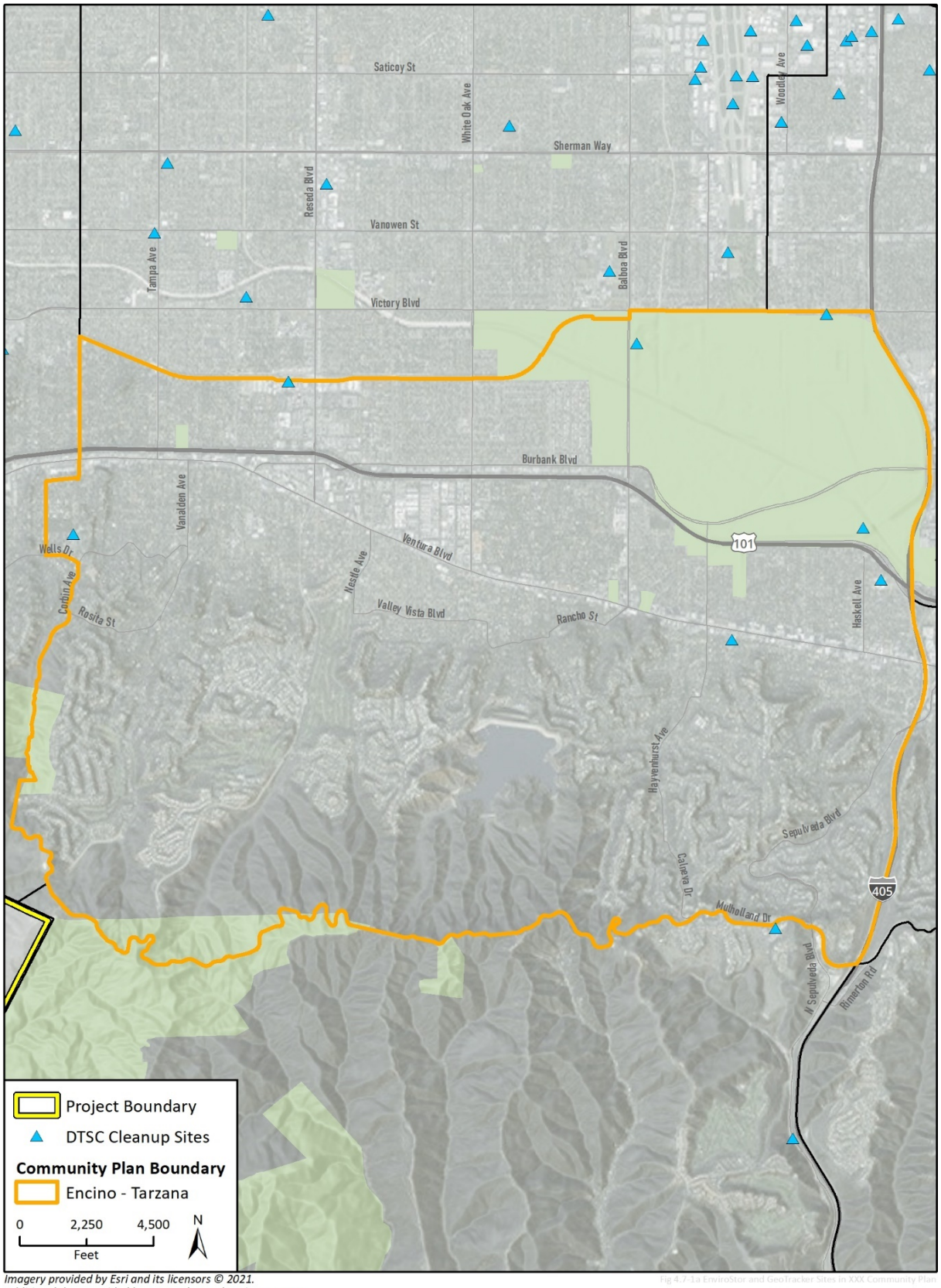
Additional data provided by Geotracker and Envirostor, 2021.

Fig 4.7-1a EnviroStor and GeoTracker Sites in XXX Community Plan

Figure 4.7-1h Hazardous Waste Sites in the Encino – Tarzana Community Plan Area



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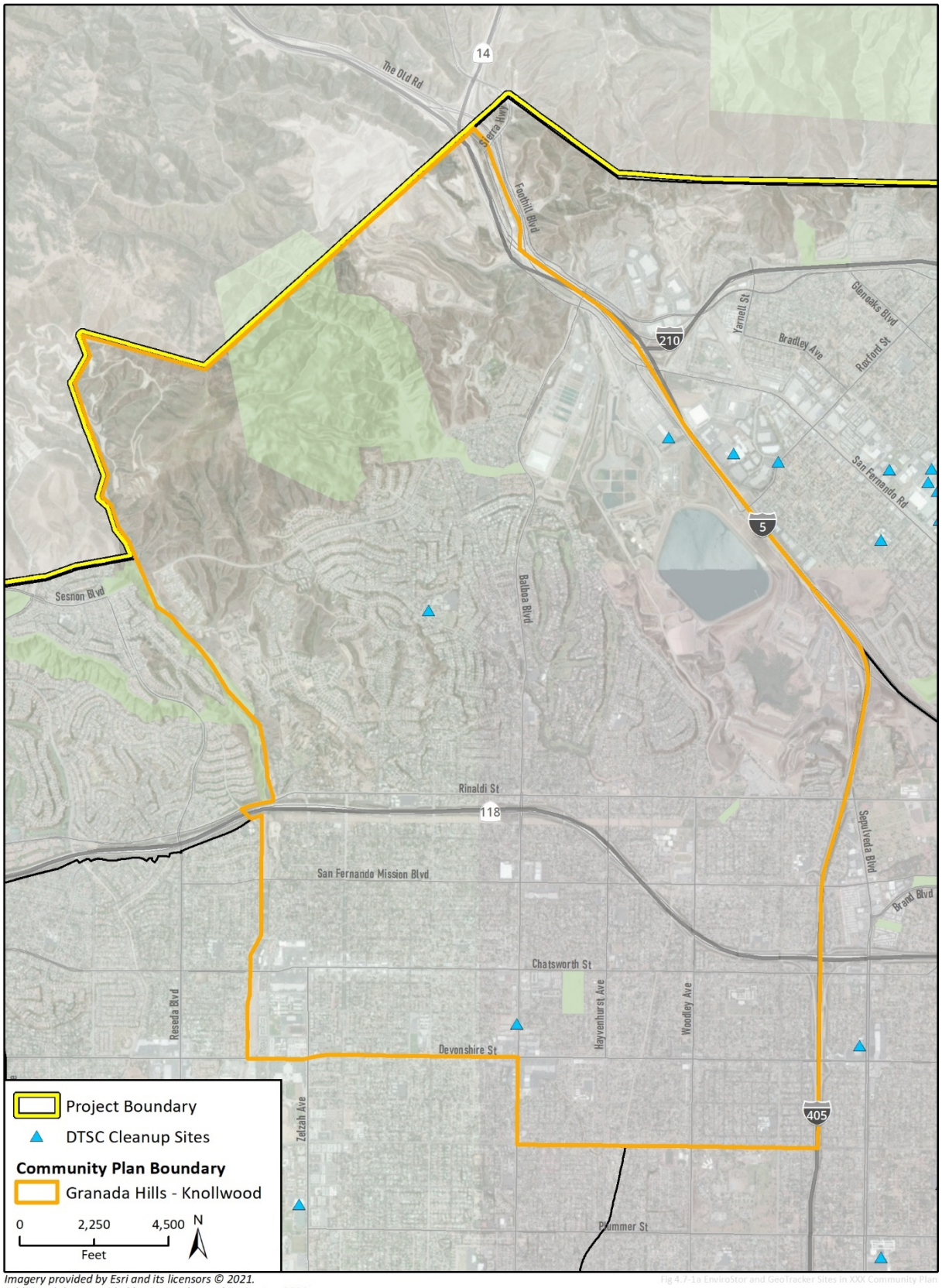
Additional data provided by Geotracker and Envirostor, 2021.

Fig 4.7-1a EnviroStor and GeoTracker Sites in XXX Community Plan

Figure 4.7-1i Hazardous Waste Sites in the Granada Hills – Knollwood Community Plan Area



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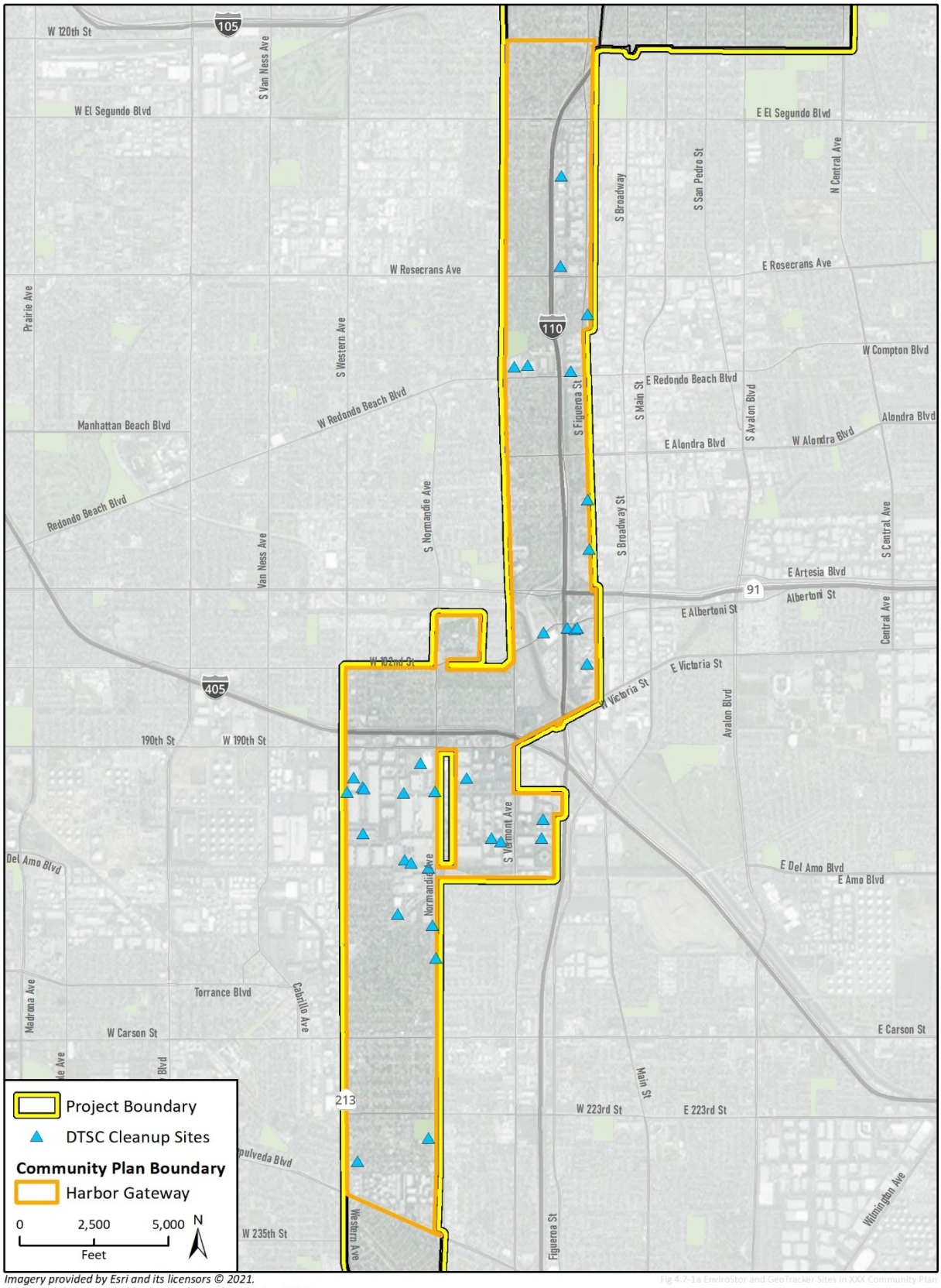
Additional data provided by Geotracker and Envirostor, 2021.

Fig 4.7-1a EnviroStor and GeoTracker Sites in XXX Community Plan

Figure 4.7-1j Hazardous Waste Sites in the Harbor Gateway Community Plan Area



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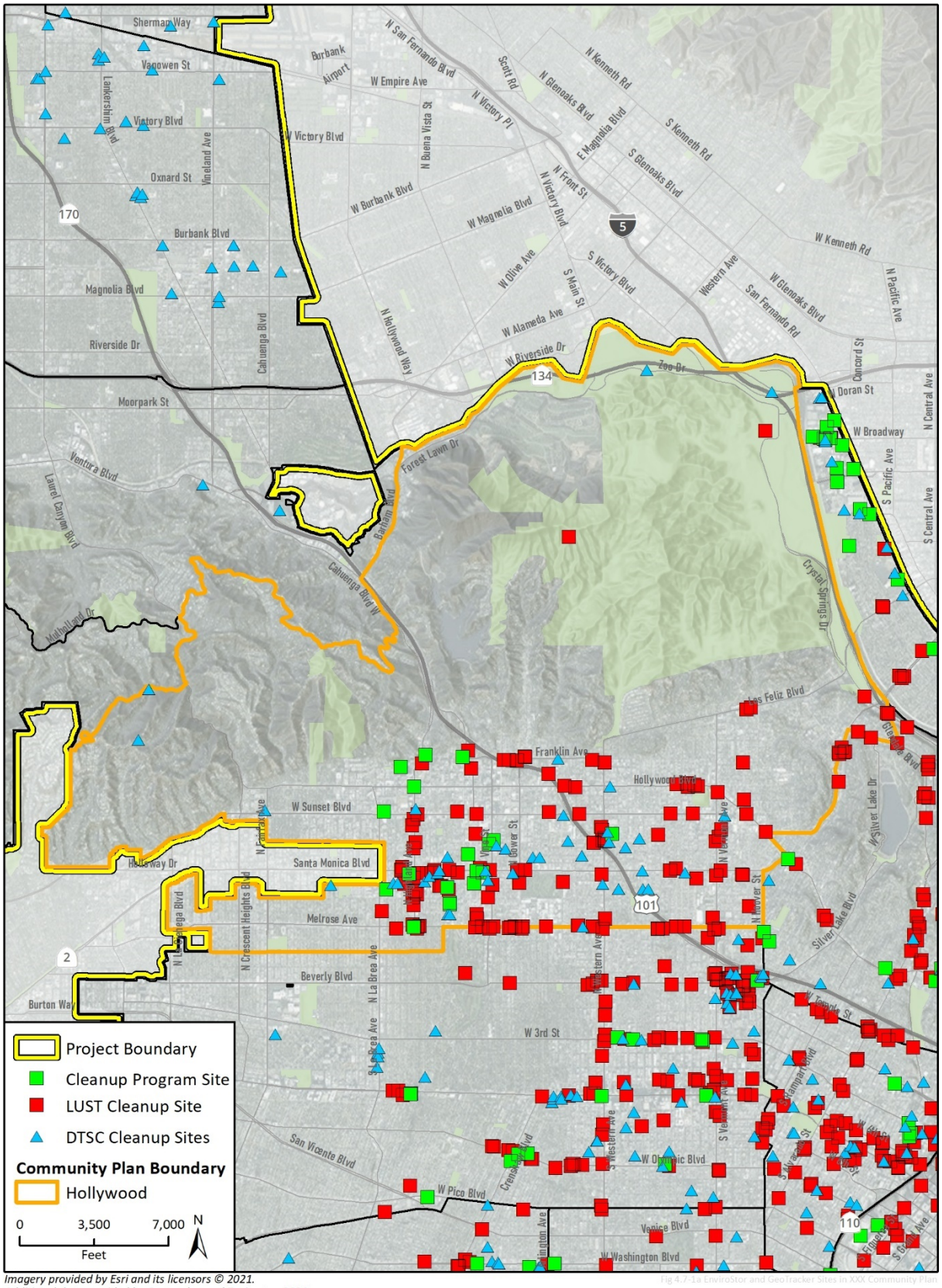
Additional data provided by Geotracker and Envirostor, 2021.

Fig 4.7-1a EnviroStor and GeoTracker Sites in XXX Community Plan

Figure 4.7-1k Hazardous Waste Sites in the Hollywood Community Plan Area



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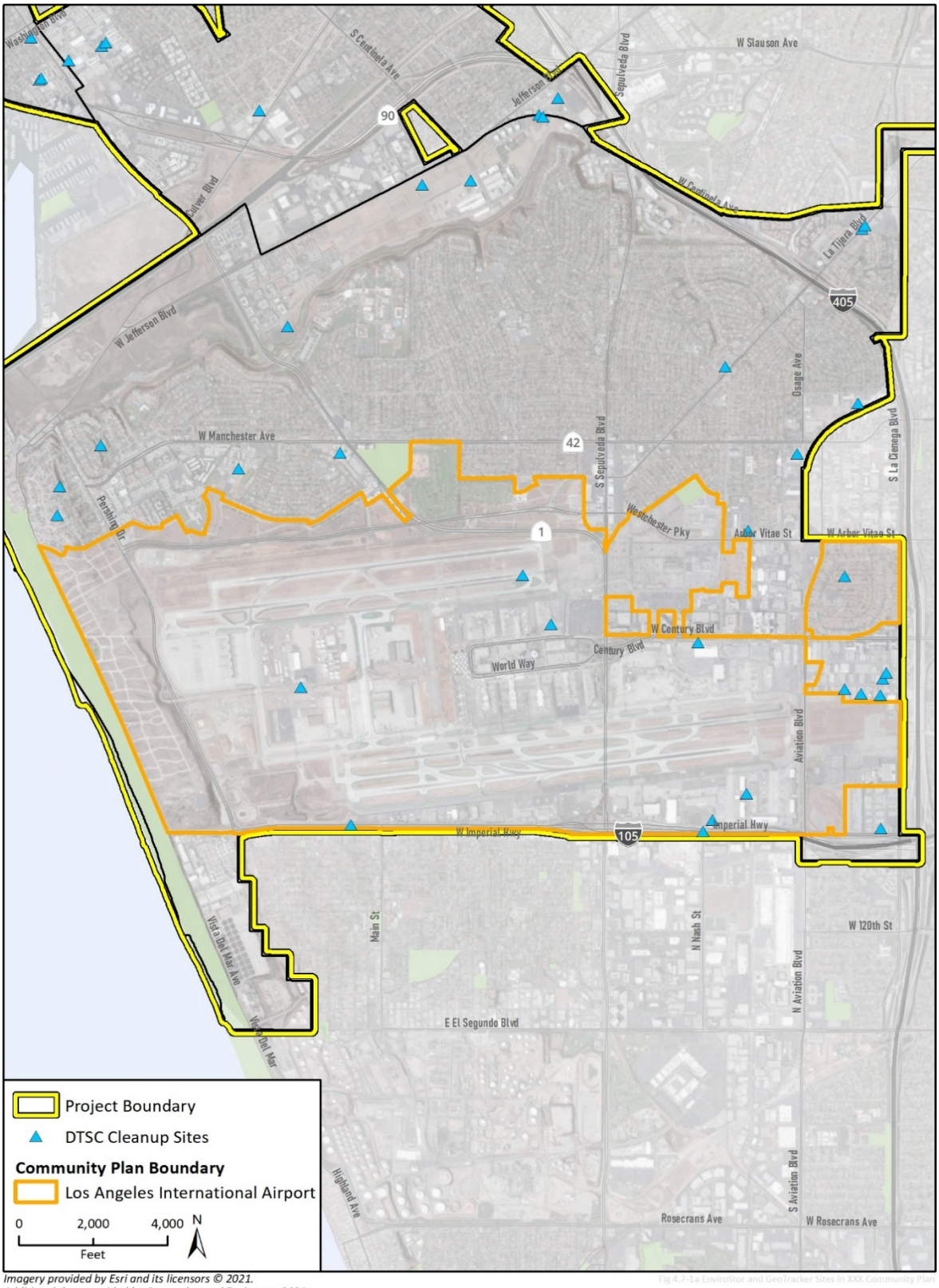
Additional data provided by Geotracker and Envirostor, 2021.

Figure 4.7-11 Hazardous Waste Sites in the Los Angeles International Airport Community Plan Area



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Additional data provided by Geotracker and Envirostor, 2021.

Figure 4.7-1m Hazardous Waste Sites in the Mission Hills–Panorama City–North Hills Community Plan Area

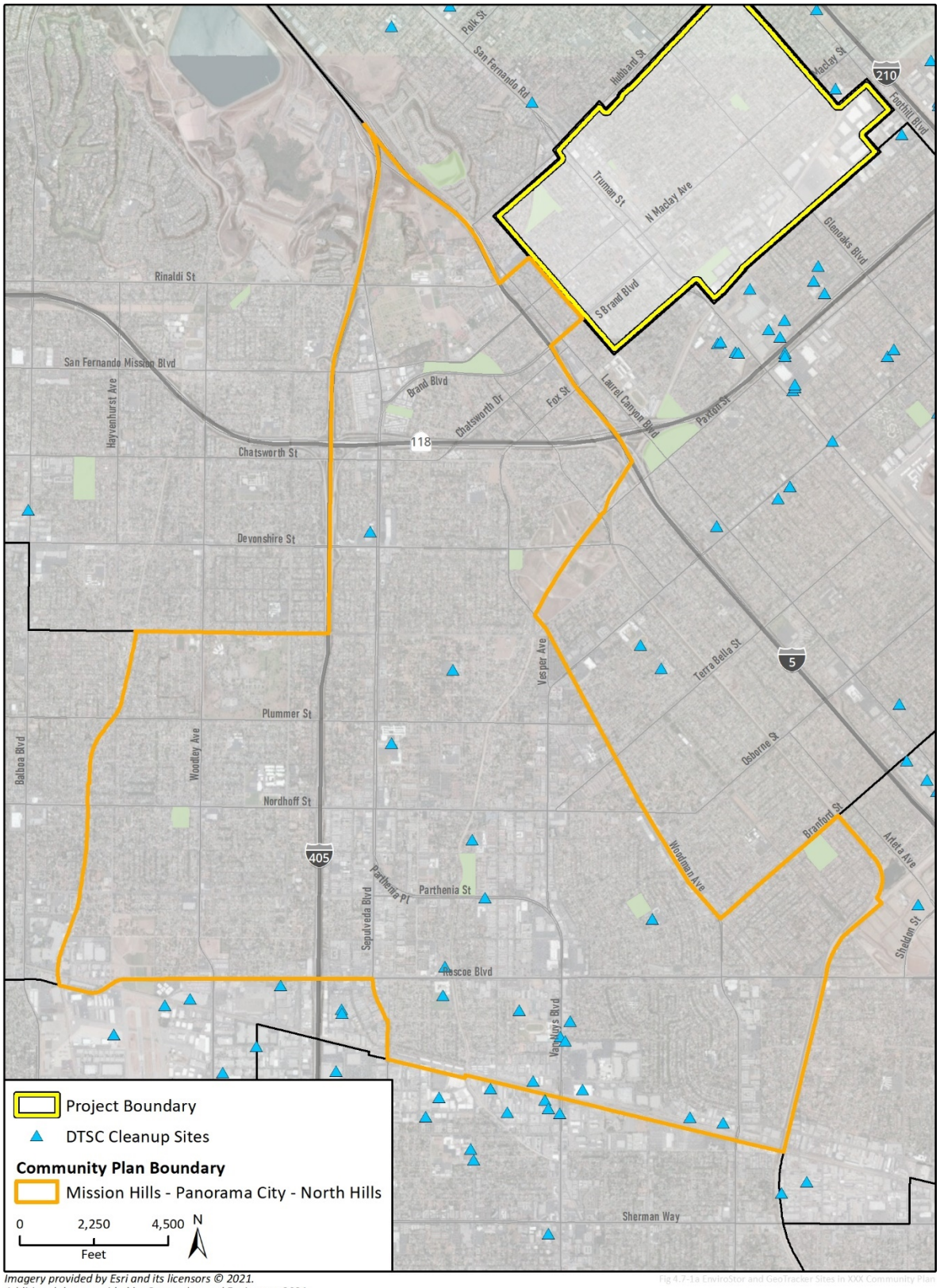
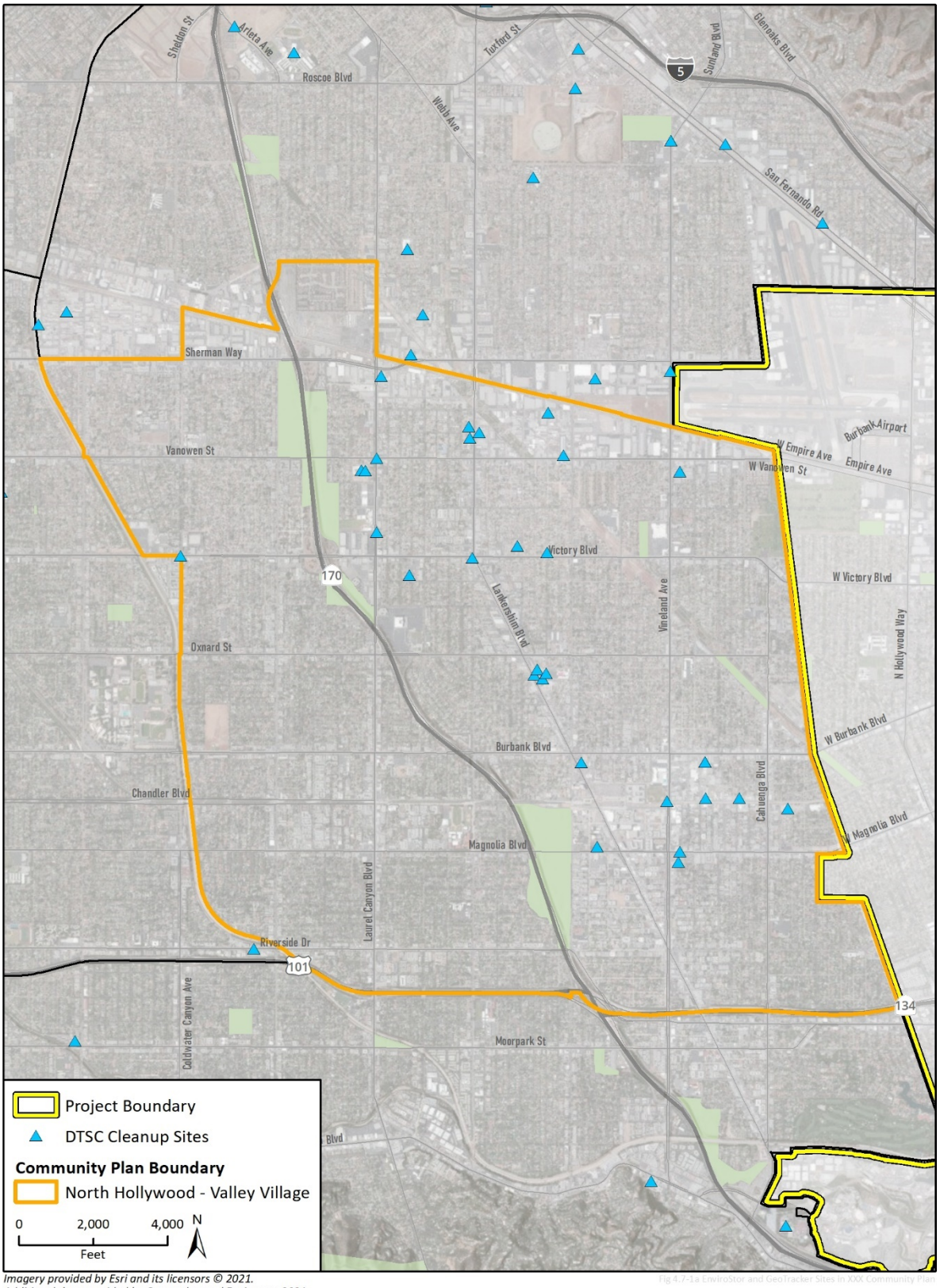


Figure 4.7-1n Hazardous Waste Sites in the North Hollywood–Valley Village Community Plan Area



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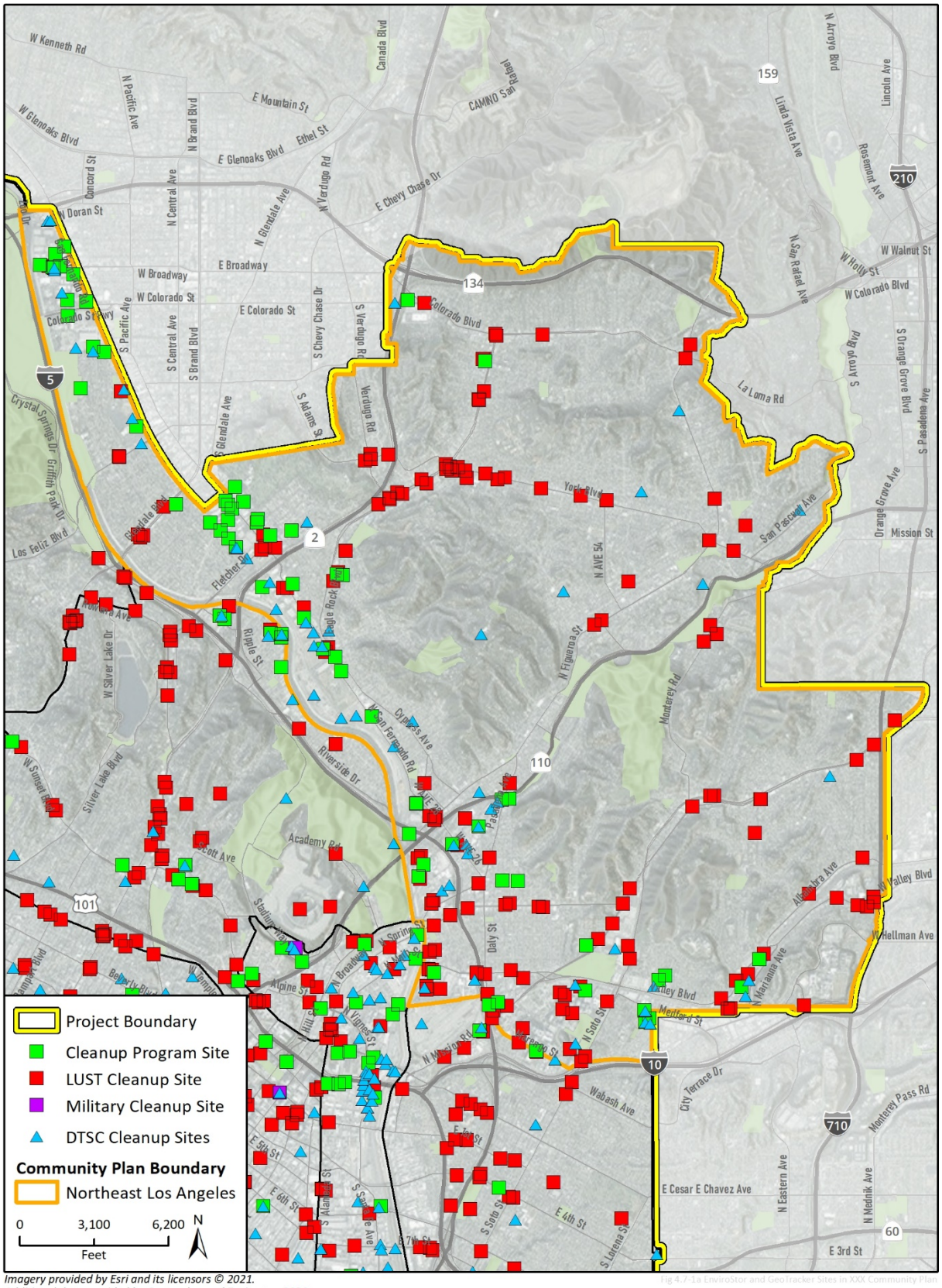
Additional data provided by Geotracker and Envirostor, 2021.

Fig 4.7-1a EnviroStor and GeoTracker Sites in XXX Community Plan

Figure 4.7-1o Hazardous Waste Sites in the Northeast Los Angeles Community Plan Area



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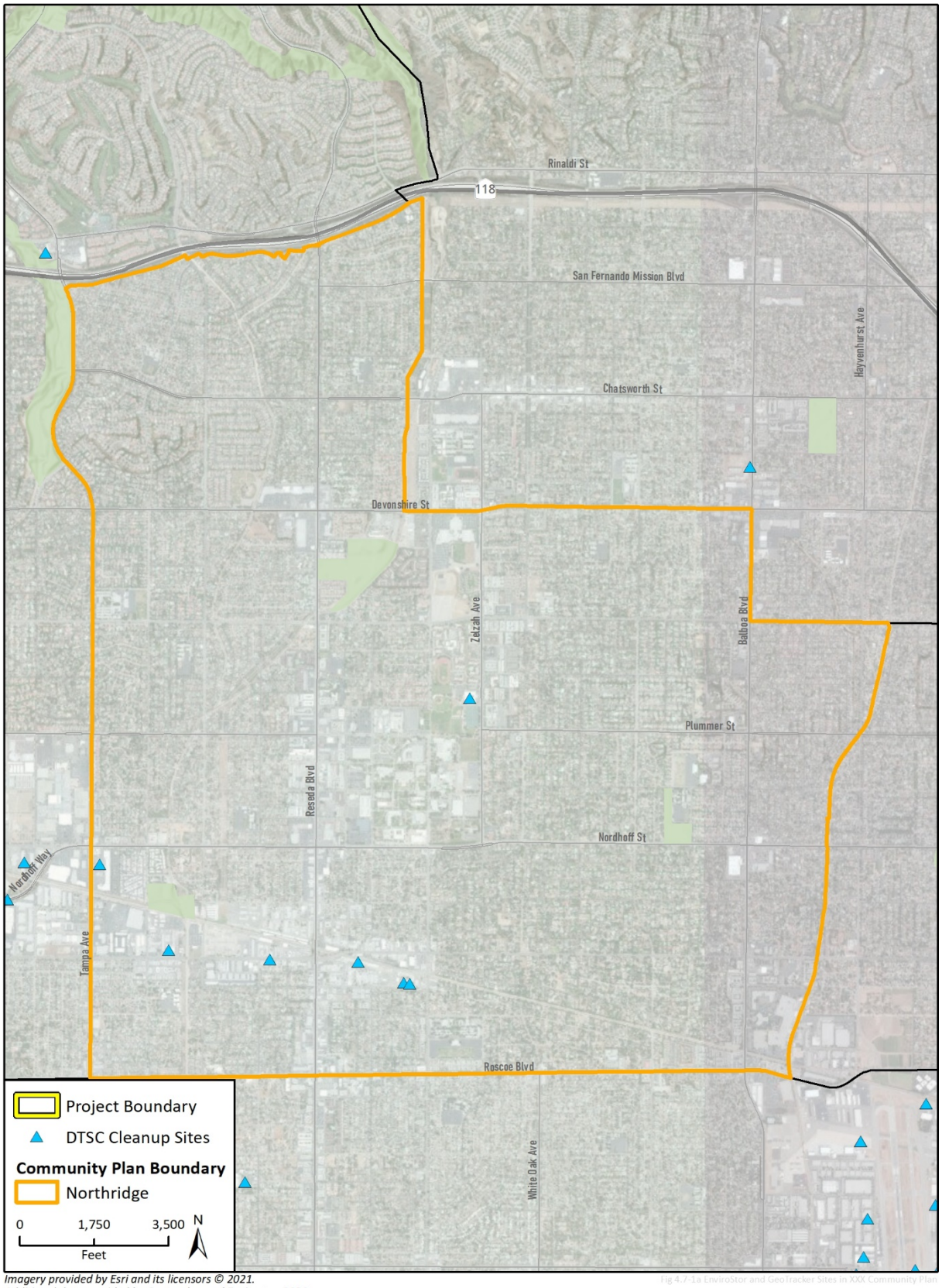
Additional data provided by Geotracker and Envirostor, 2021.

Fig 4.7-1a EnviroStor and GeoTracker Sites in XXX Community Plan

Figure 4.7-1p Hazardous Waste Sites in the Northridge Community Plan Area



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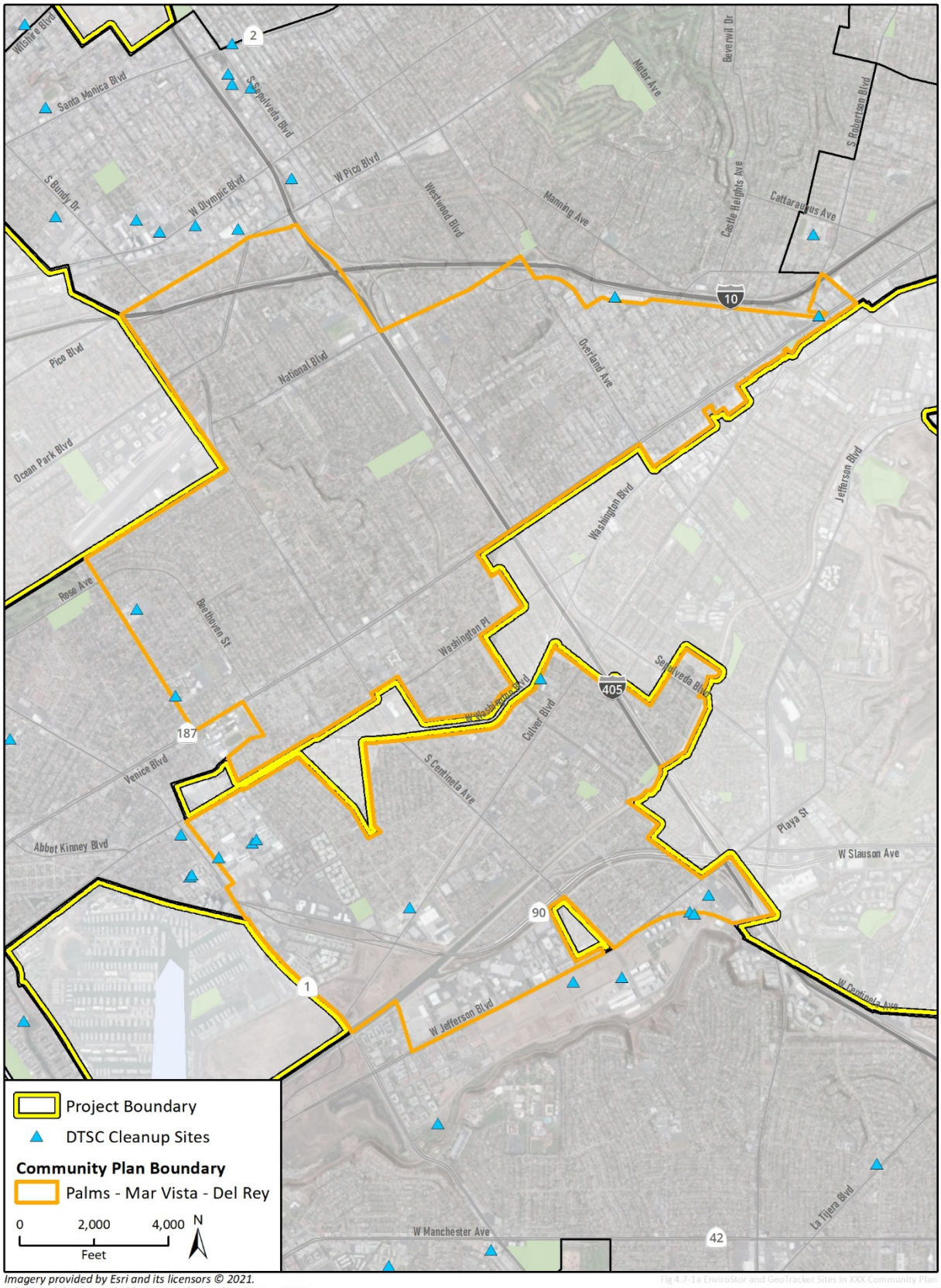
Additional data provided by Geotracker and Envirostor, 2021.

Fig 4.7-1a EnviroStor and GeoTracker Sites in XXX Community Plan

Figure 4.7-1q Hazardous Waste Sites in the Palms–Mar Vista–Del Rey Community Plan Area



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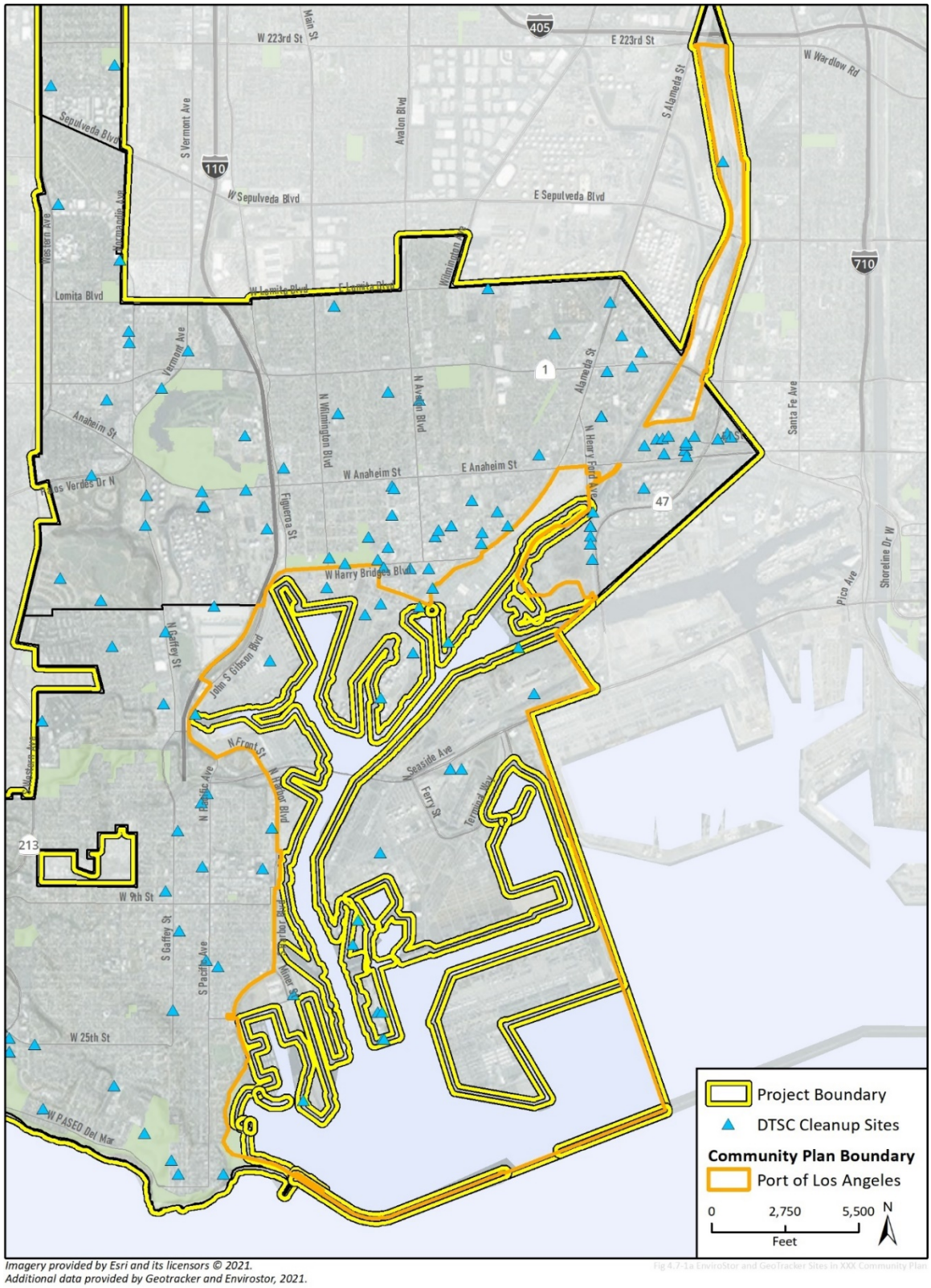
Additional data provided by Geotracker and Envirostor, 2021.

Fig 4.7-1a EnviroStor and GeoTracker Sites in XXX Community Plan

Figure 4.7-1r Hazardous Waste Sites in the Port of Los Angeles Community Plan Area



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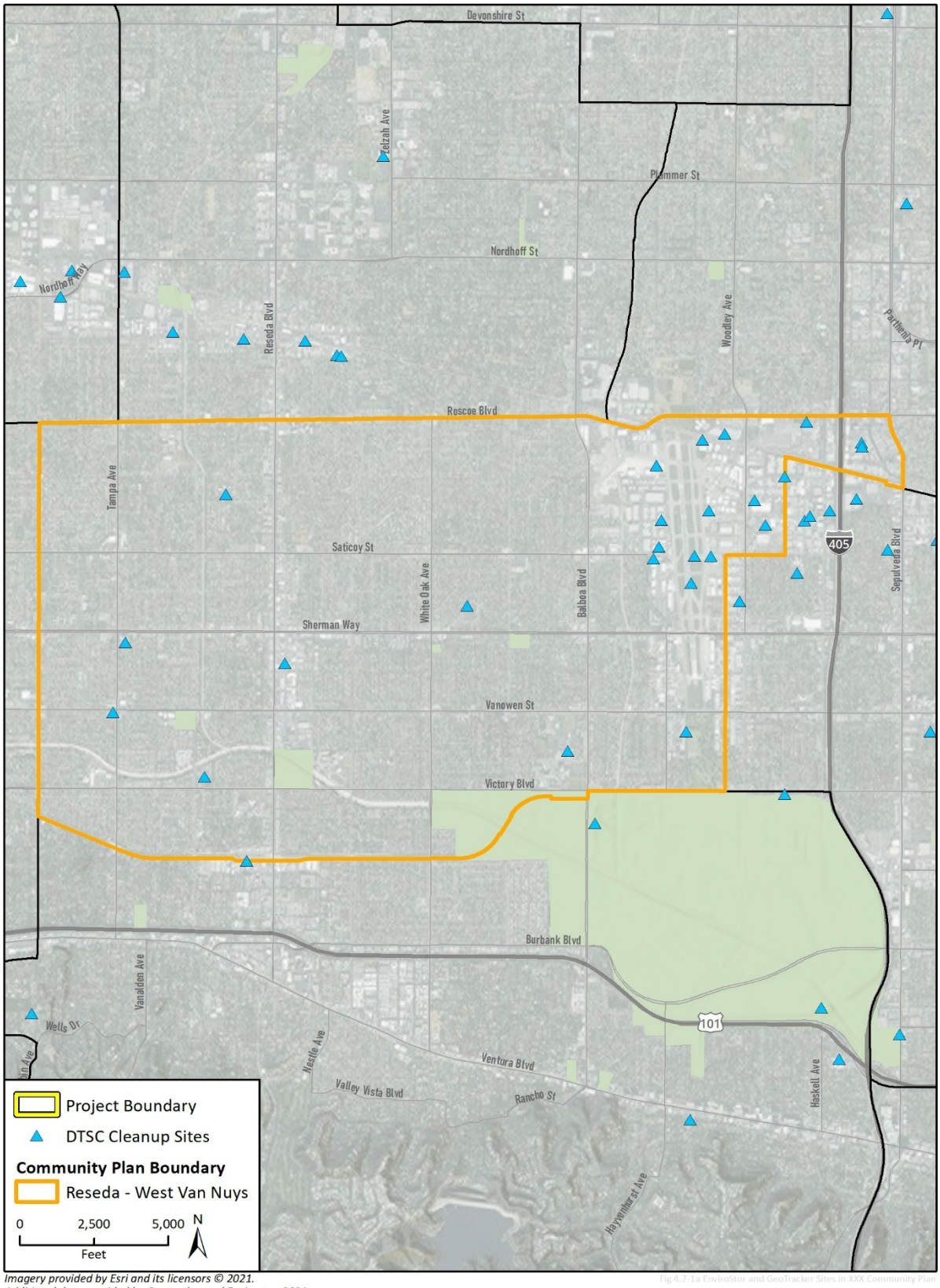
Additional data provided by Geotracker and Envirostor, 2021.

Fig 4.7-1a EnviroStor and GeoTracker Sites in XXX Community Plan

Figure 4.7-1s Hazardous Waste Sites in the Raseda – West Van Nuys Community Plan Area



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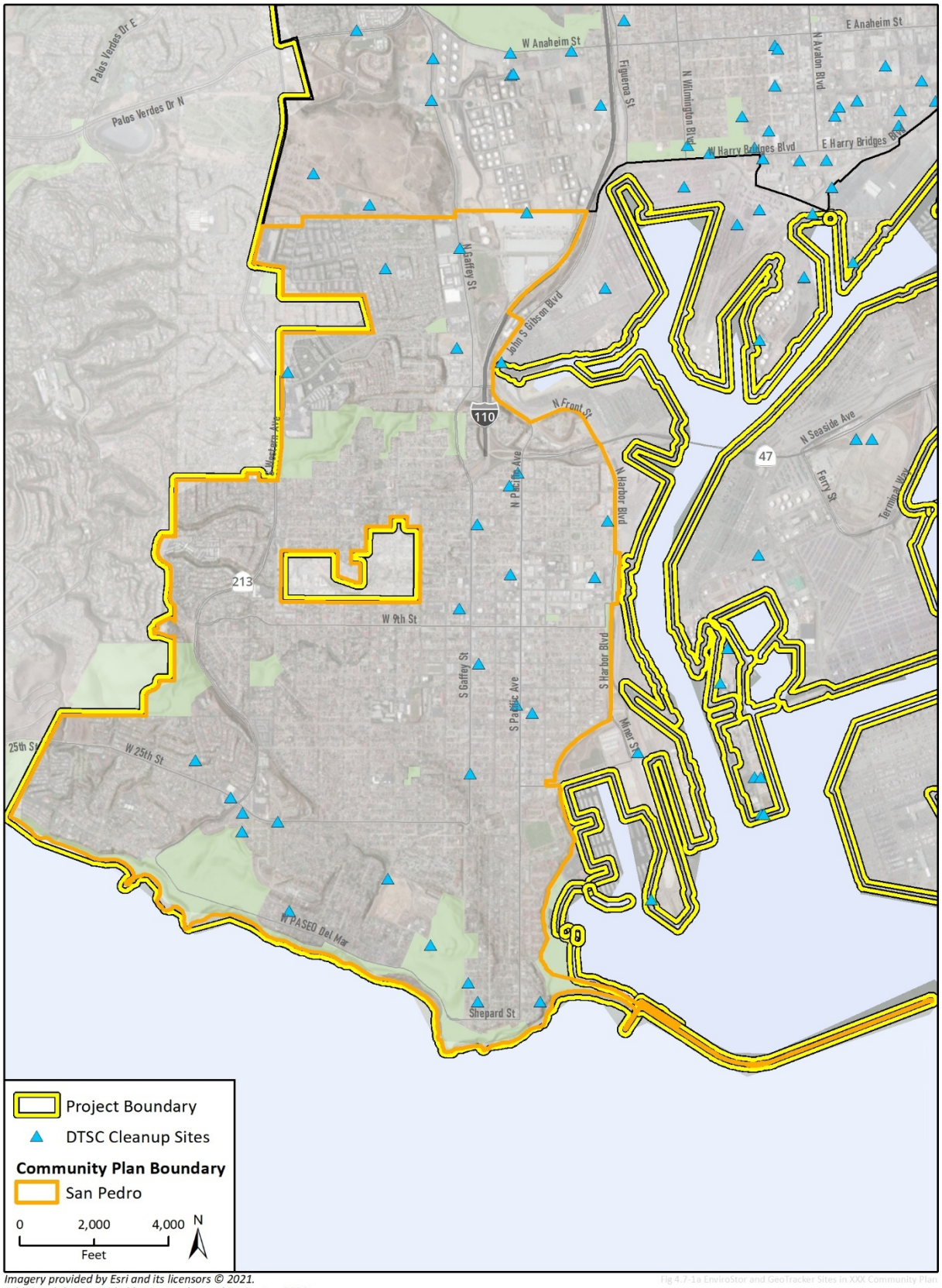
Additional data provided by Geotracker and Envirostor, 2021.

Figure 4.7-1t Hazardous Waste Sites in the San Pedro Community Plan Area



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Additional data provided by Geotracker and Envirostor, 2021.

Fig 4.7-1a EnviroStor and GeoTracker Sites in XXX Community Plan

Figure 4.7-1u Hazardous Waste Sites in the Sherman Oaks–Studio City–Cahuenga Pass Community Plan Area

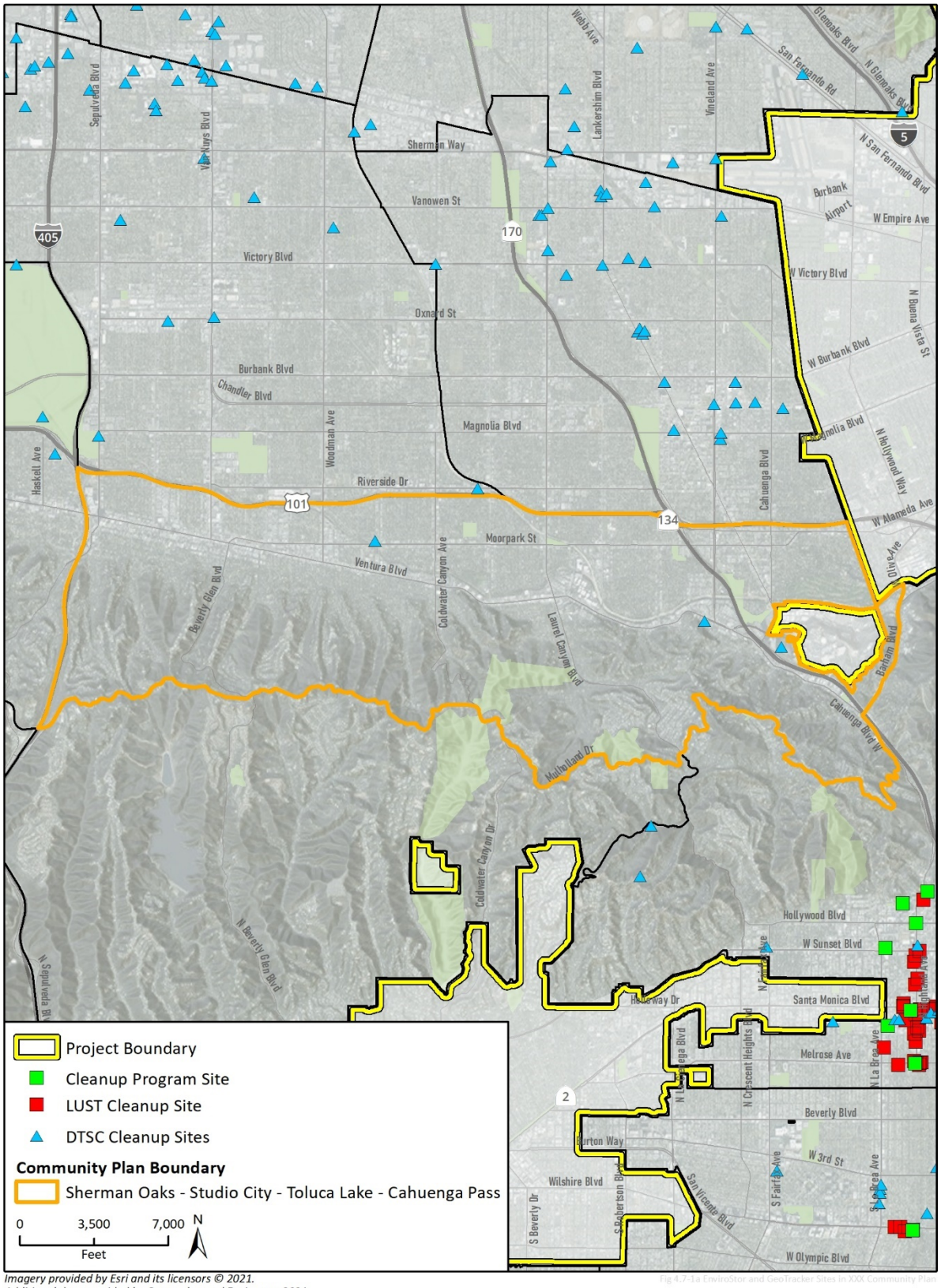
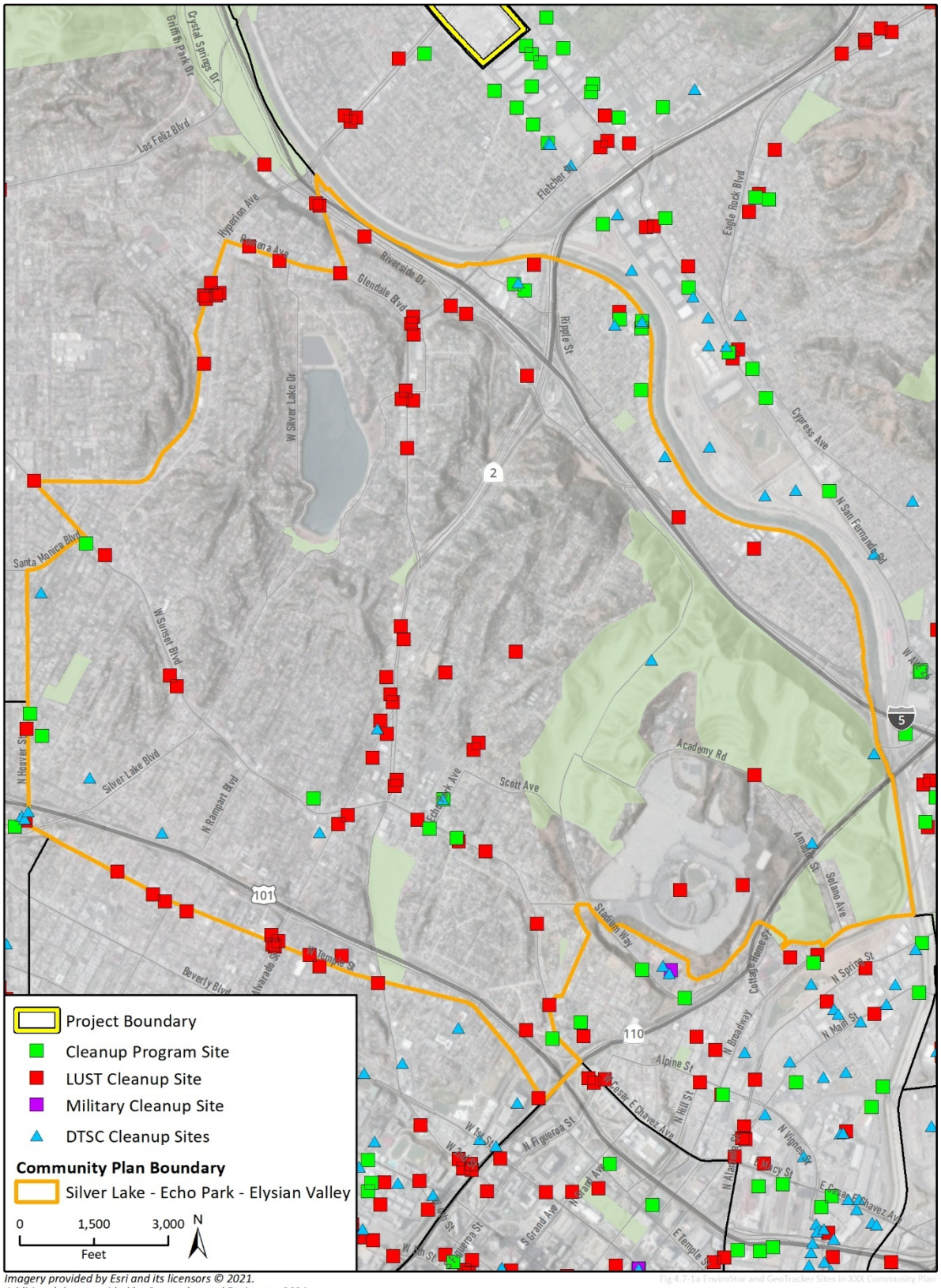


Figure 4.7-1v Hazardous Waste Sites in the Silver Lake – Echo Park – Elysian Valley Community Plan Area



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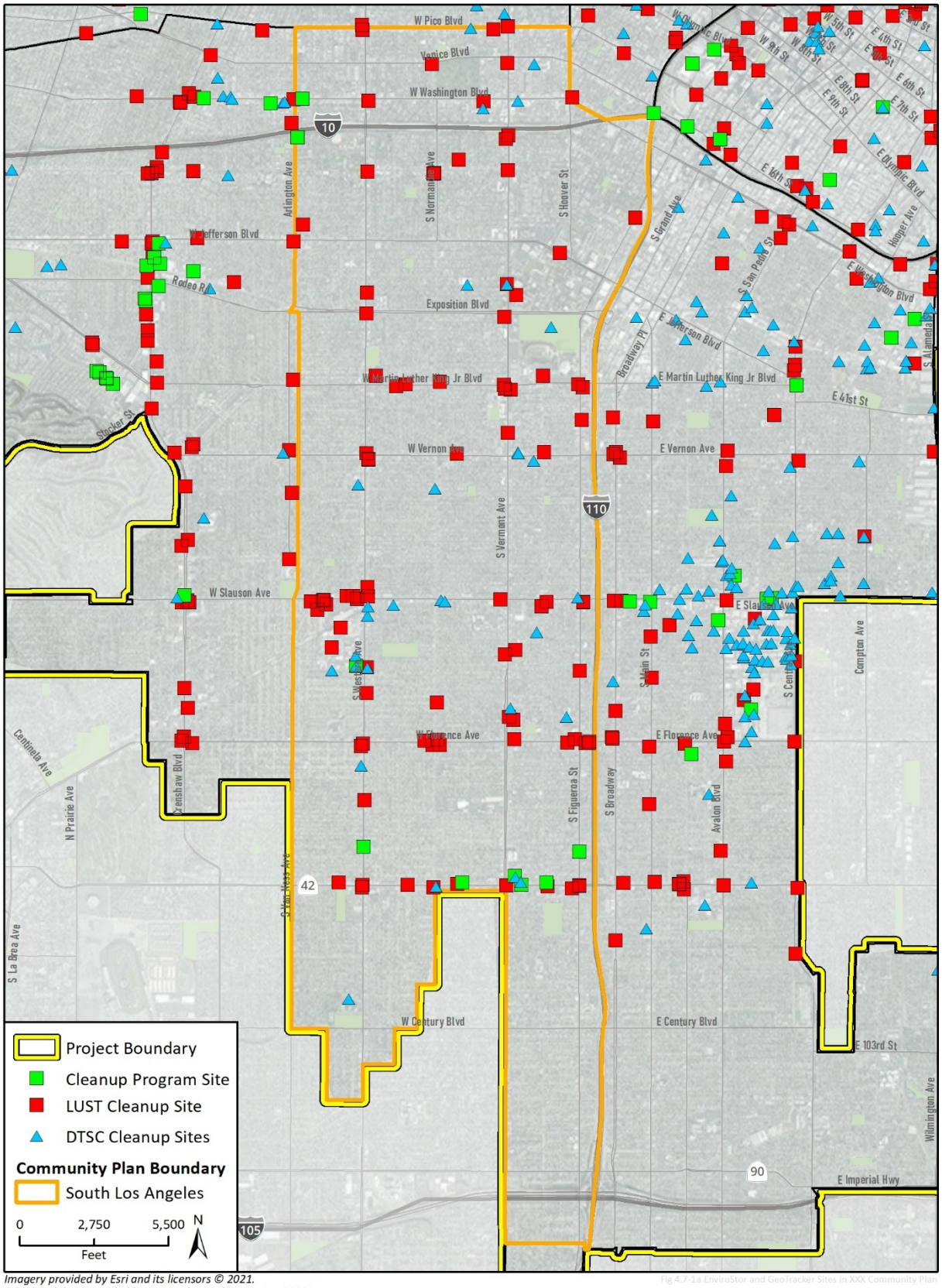
Additional data provided by Geotracker and Envirostor, 2021.

Figure 4.7-1w Hazardous Waste Sites in the South Los Angeles Community Plan Area



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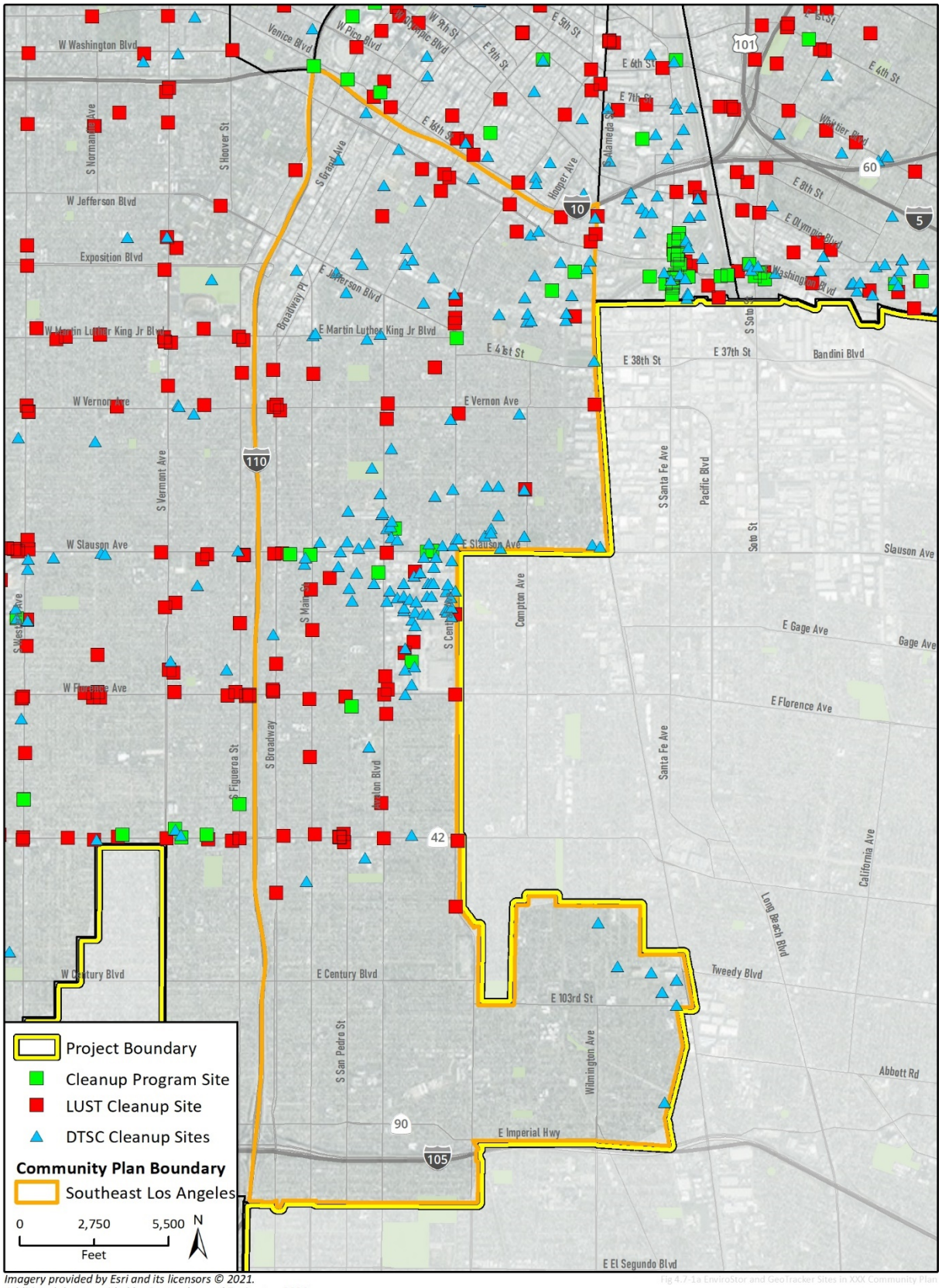
Additional data provided by Geotracker and Envirostor, 2021.

Fig 4.7-1a EnviroStor and GeoTracker Sites in XXX Community Plan

Figure 4.7-1x Hazardous Waste Sites in the Southeast Los Angeles Community Plan Area



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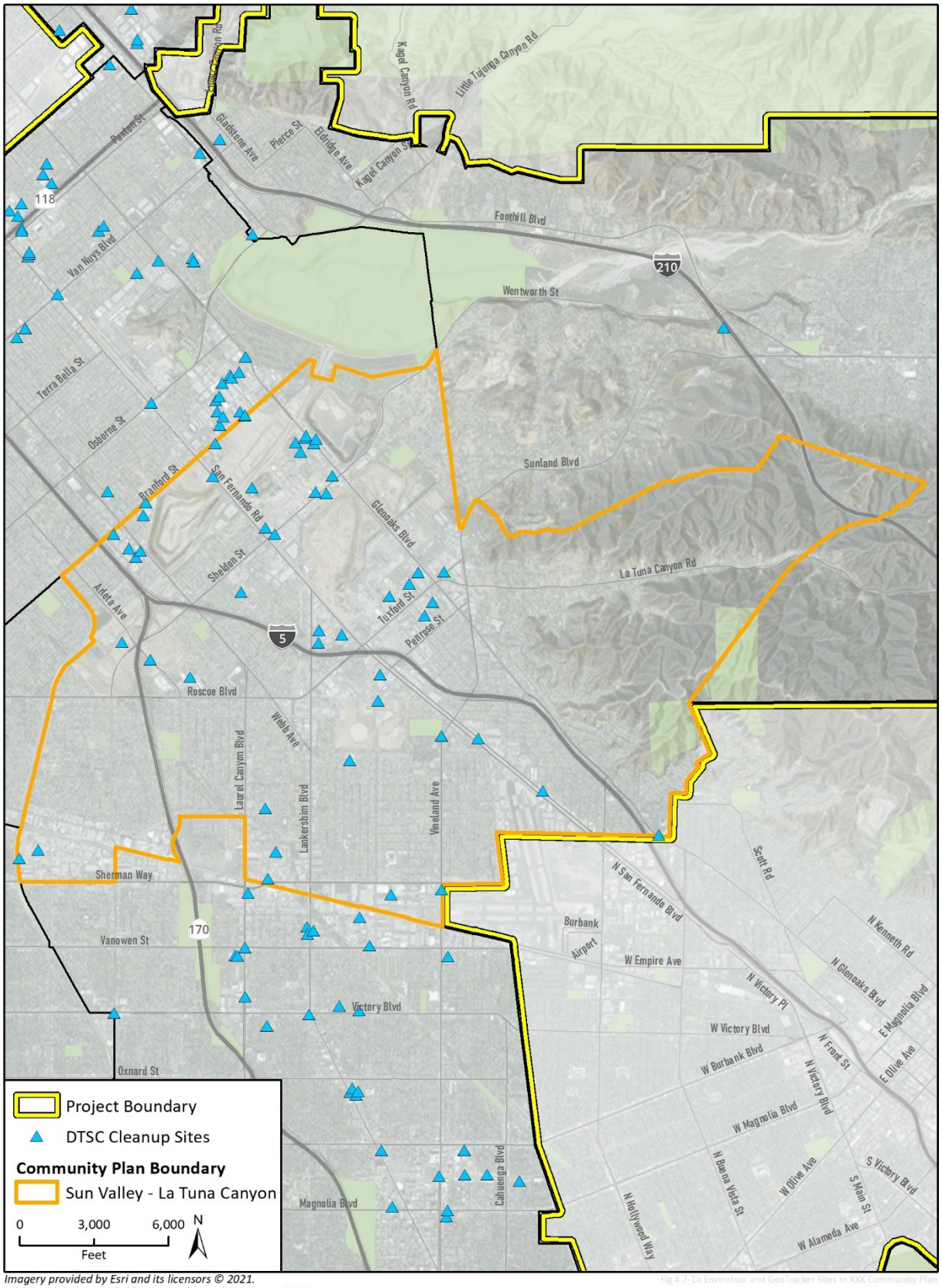
Additional data provided by Geotracker and Envirostor, 2021.

Fig 4.7-1a EnviroStor and GeoTracker Sites in XXX Community Plan

Figure 4.7-1y Hazardous Waste Sites in the Sun Valley–La Tuna Canyon Community Plan Area



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Additional data provided by Geotracker and Envirostor, 2021.

Fig 4.7-1a EnviroStor and GeoTracker Sites in XXX Community Plan

Figure 4.7-1z Hazardous Waste Sites in the Sunland – Tujunga – Lake View Terrace – Shaddow Hills – East La Tuna Canyon Community Plan Area

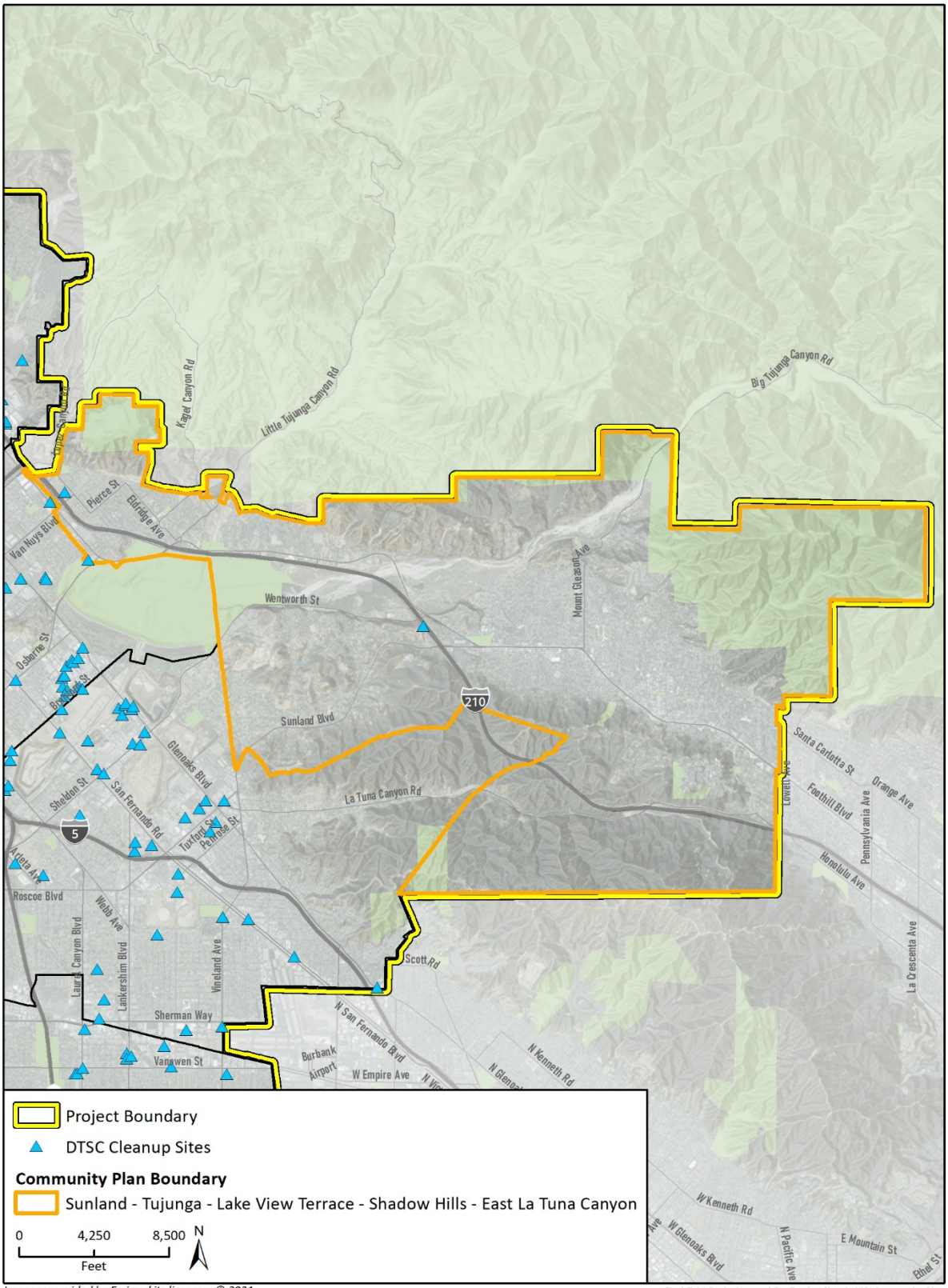
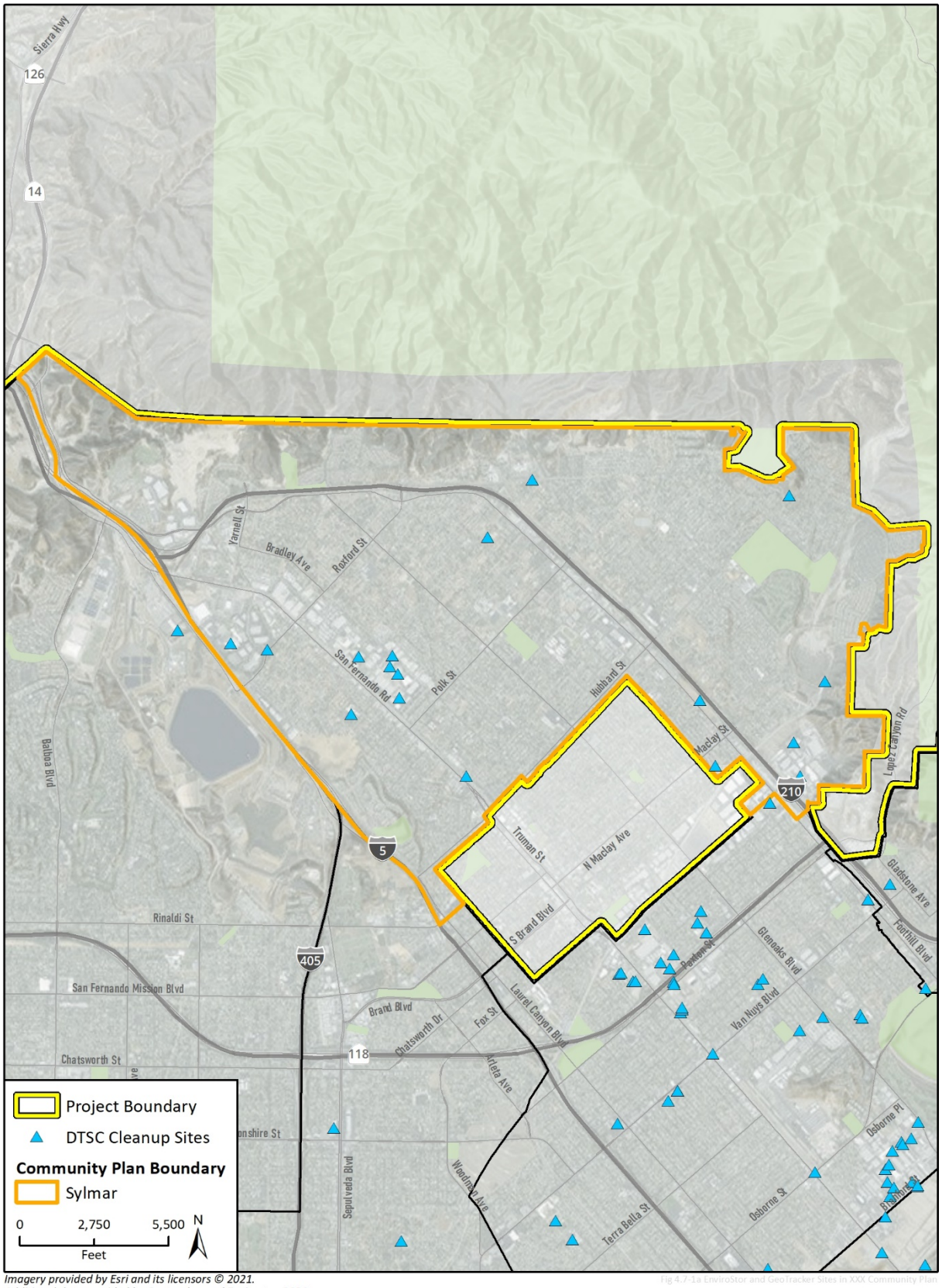


Figure 4.7-1aa Hazardous Waste Sites in the Sylmar Community Plan Area



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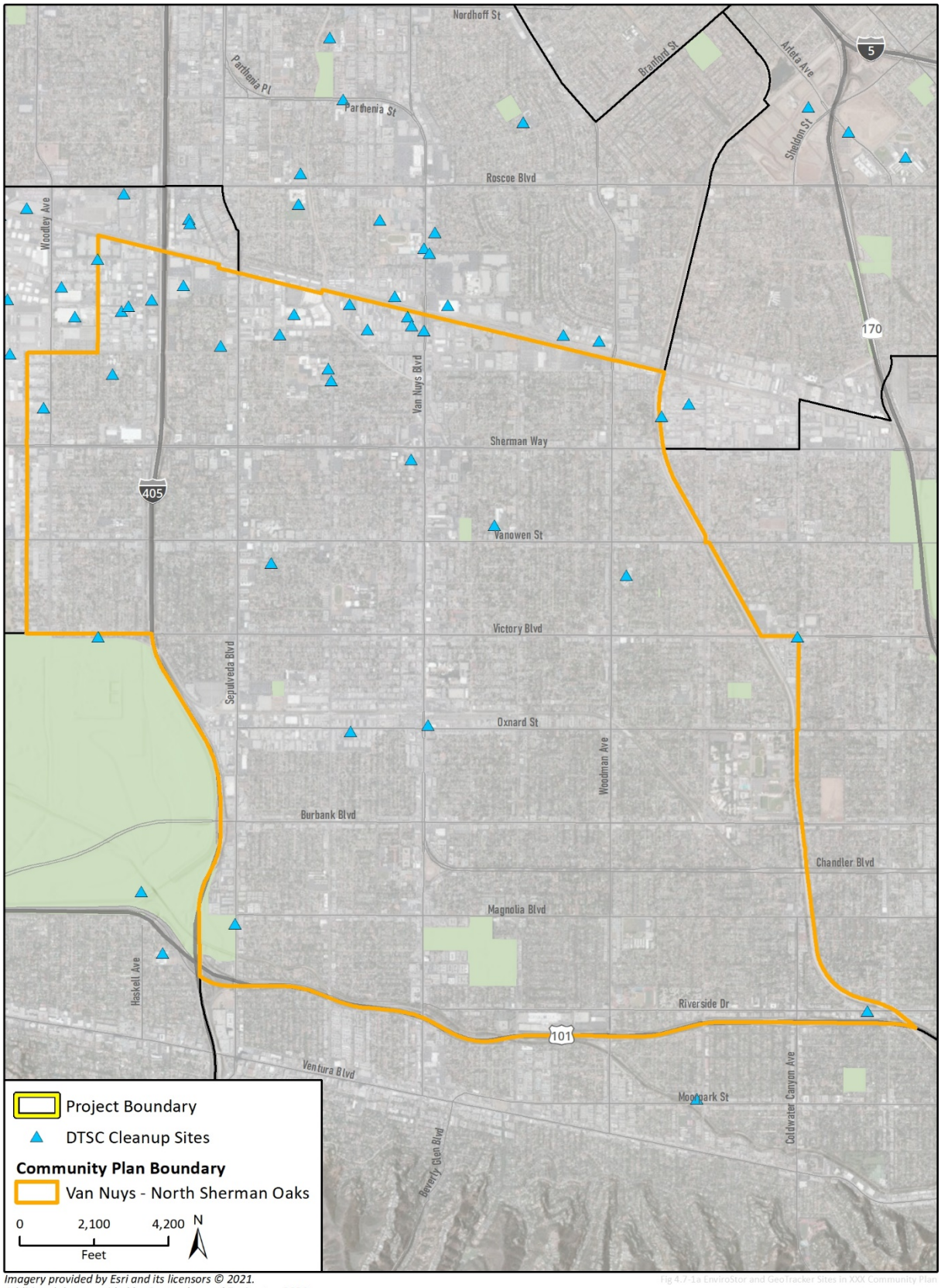
Additional data provided by Geotracker and Envirostor, 2021.

Fig 4.7-1a EnviroStor and GeoTracker Sites in XXX Community Plan

Figure 4.7-1bb Hazardous Waste Sites in the Van Nuys Community Plan Area



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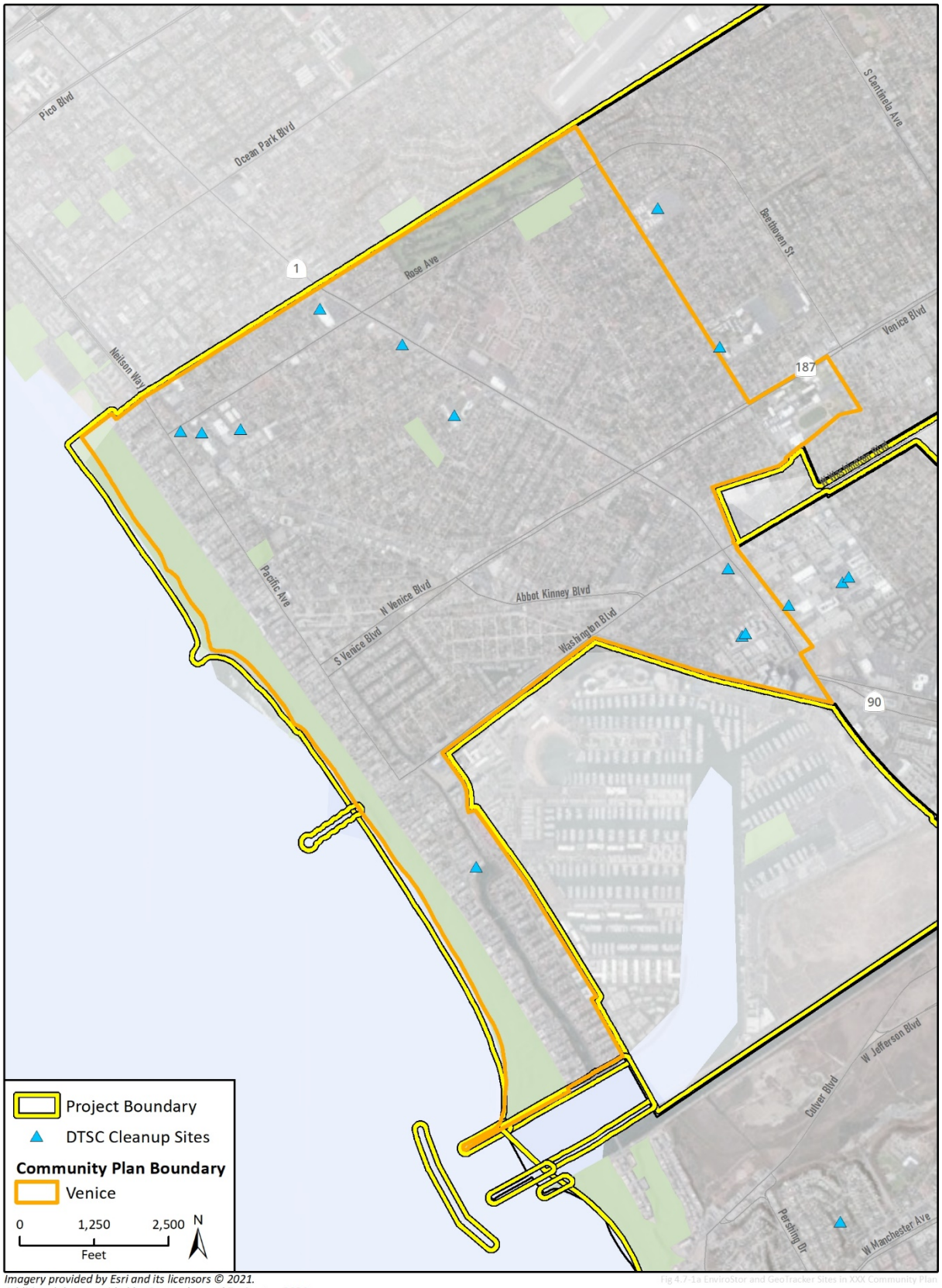
Additional data provided by Geotracker and Envirostor, 2021.

Fig 4.7-1a EnviroStor and GeoTracker Sites in XXX Community Plan

Figure 4.7-1cc Hazardous Waste Sites in the Venice Community Plan Area



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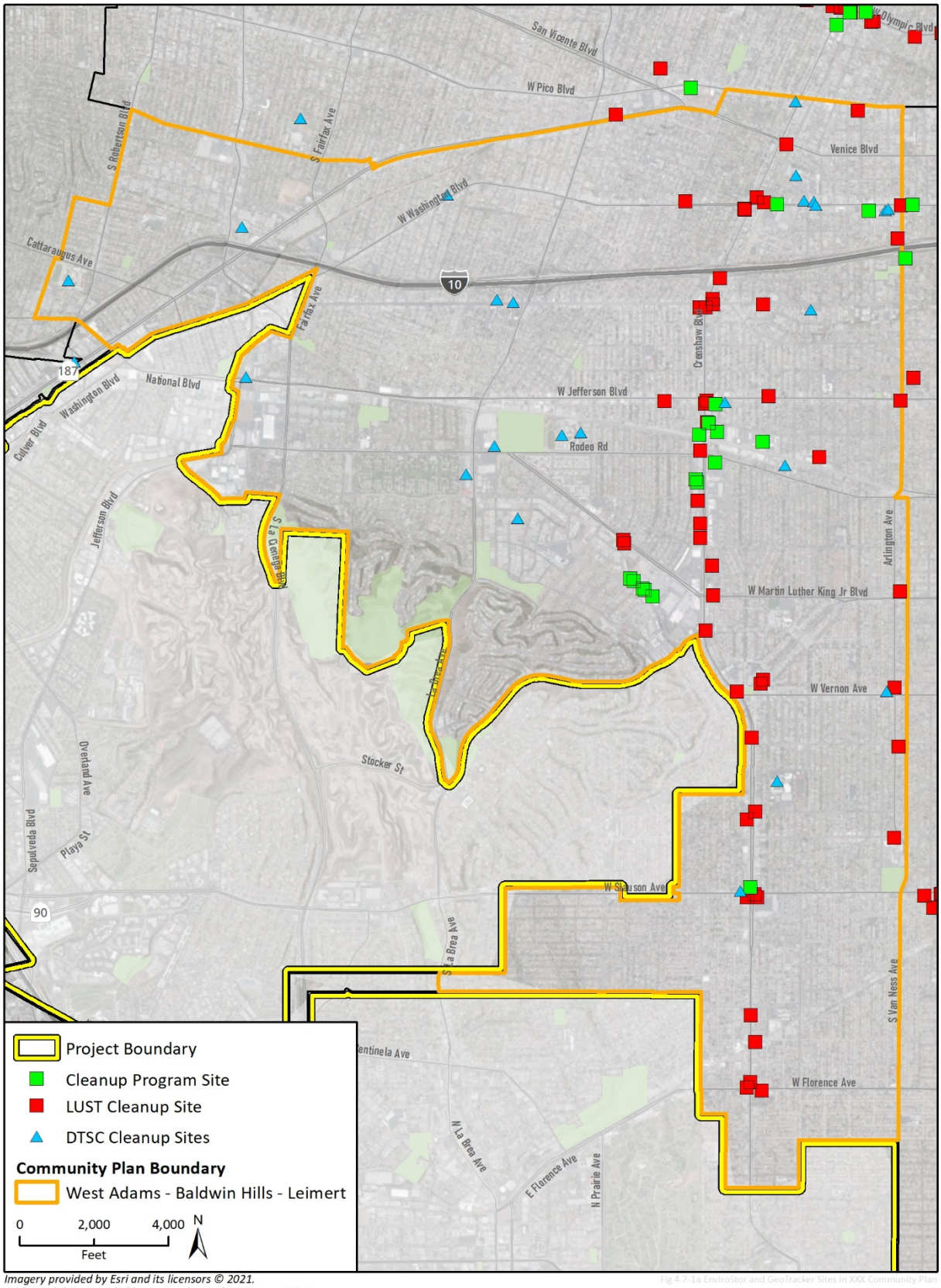
Additional data provided by Geotracker and Envirostor, 2021.

Fig 4.7-1a EnviroStor and GeoTracker Sites in XXX Community Plan

Figure 4.7-1dd Hazardous Waste Sites in the West Adams – Baldwin Hills Community Plan Area



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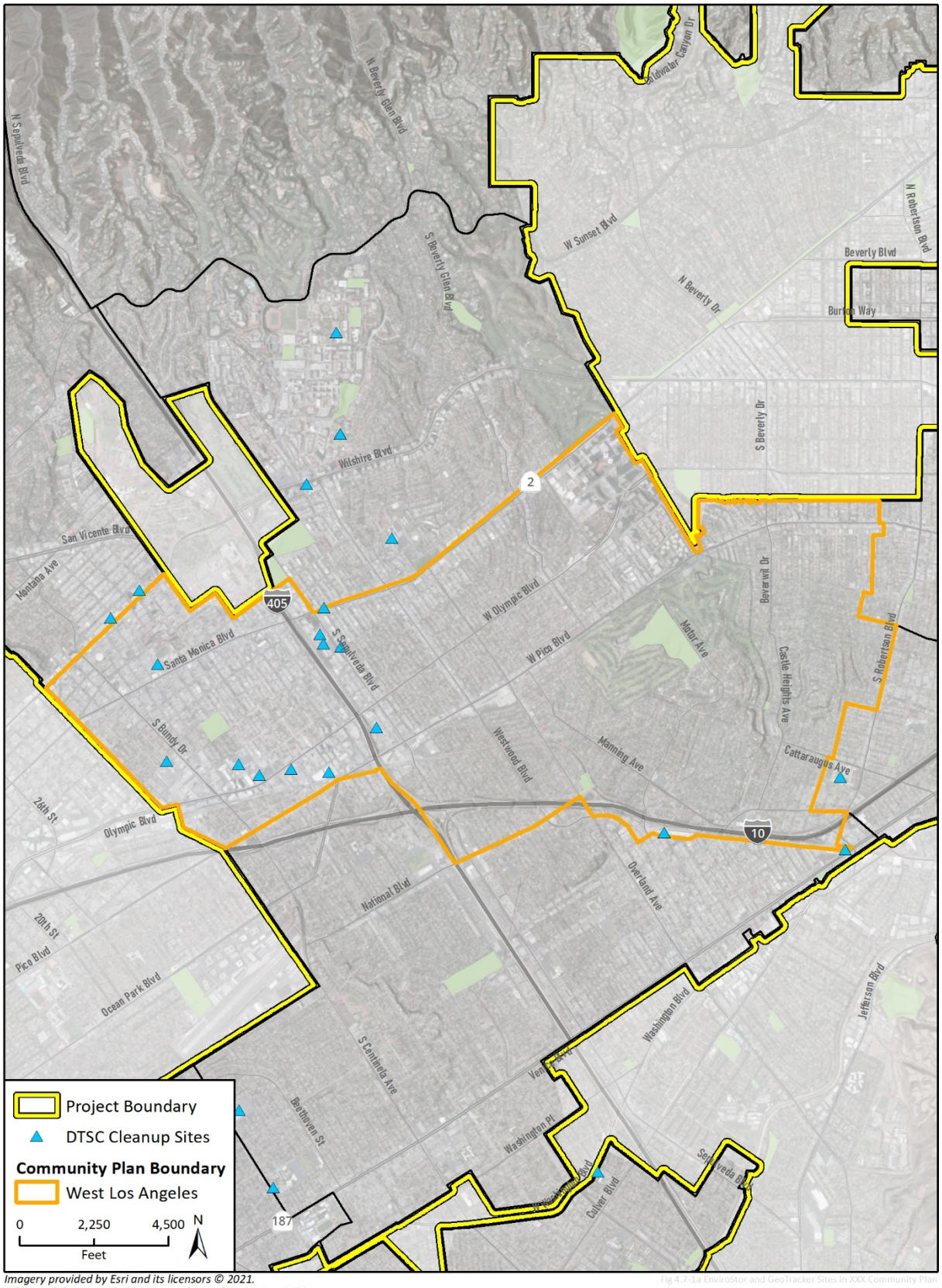
Additional data provided by Geotracker and Envirostor, 2021.

Fig 4.7-1a EnviroStor and GeoTracker Sites in XXX Community Plan

Figure 4.7-1ee Hazardous Waste Sites in the West Los Angeles Community Plan Area



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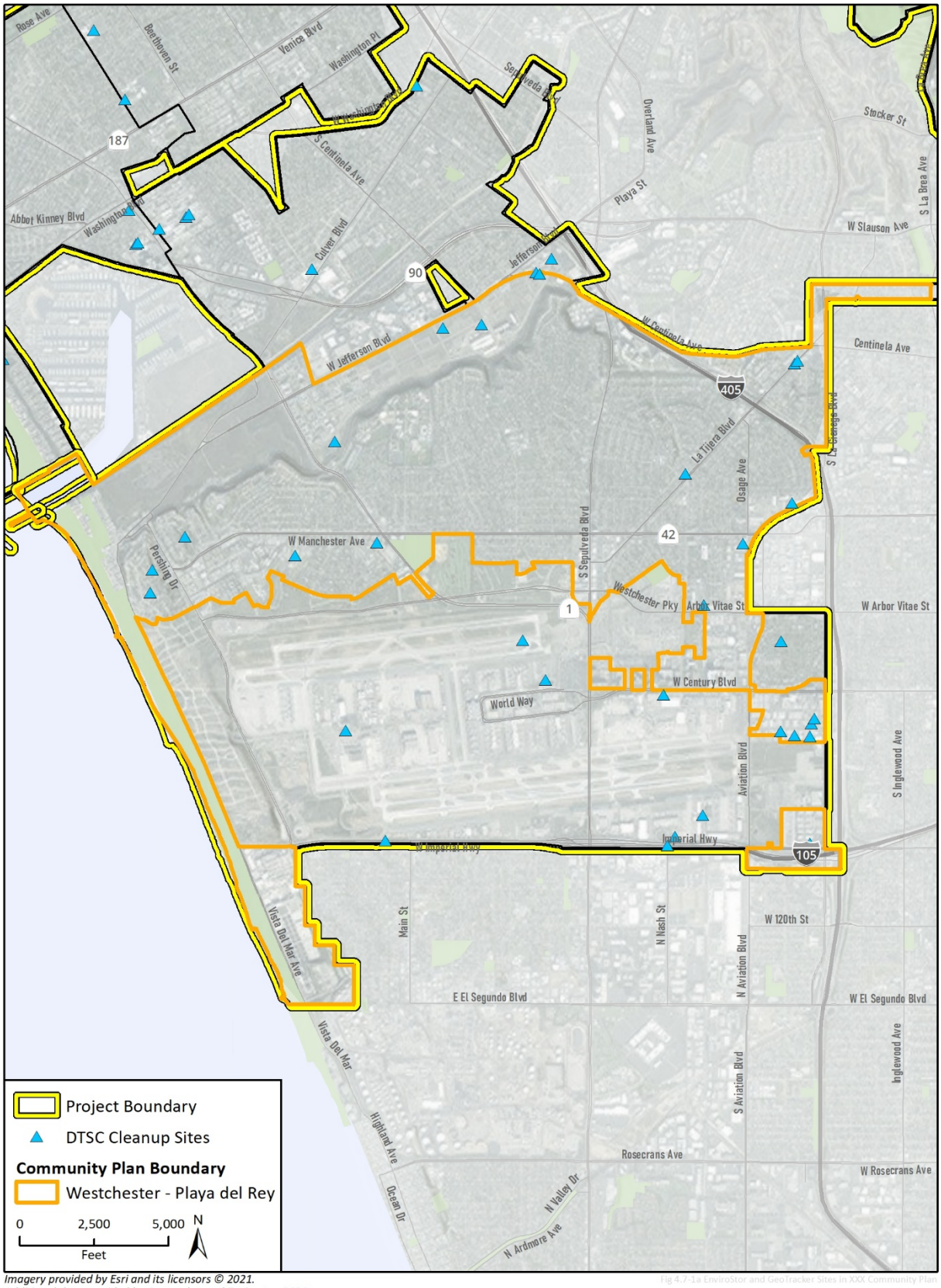
Additional data provided by Geotracker and Envirostor, 2021.

Fig 4.7-1a EnviroStor and GeoTracker Sites in XXX Community Plan

Figure 4.7-1ff Hazardous Waste Sites in the Westchester – Playa del Rey Community Plan Area



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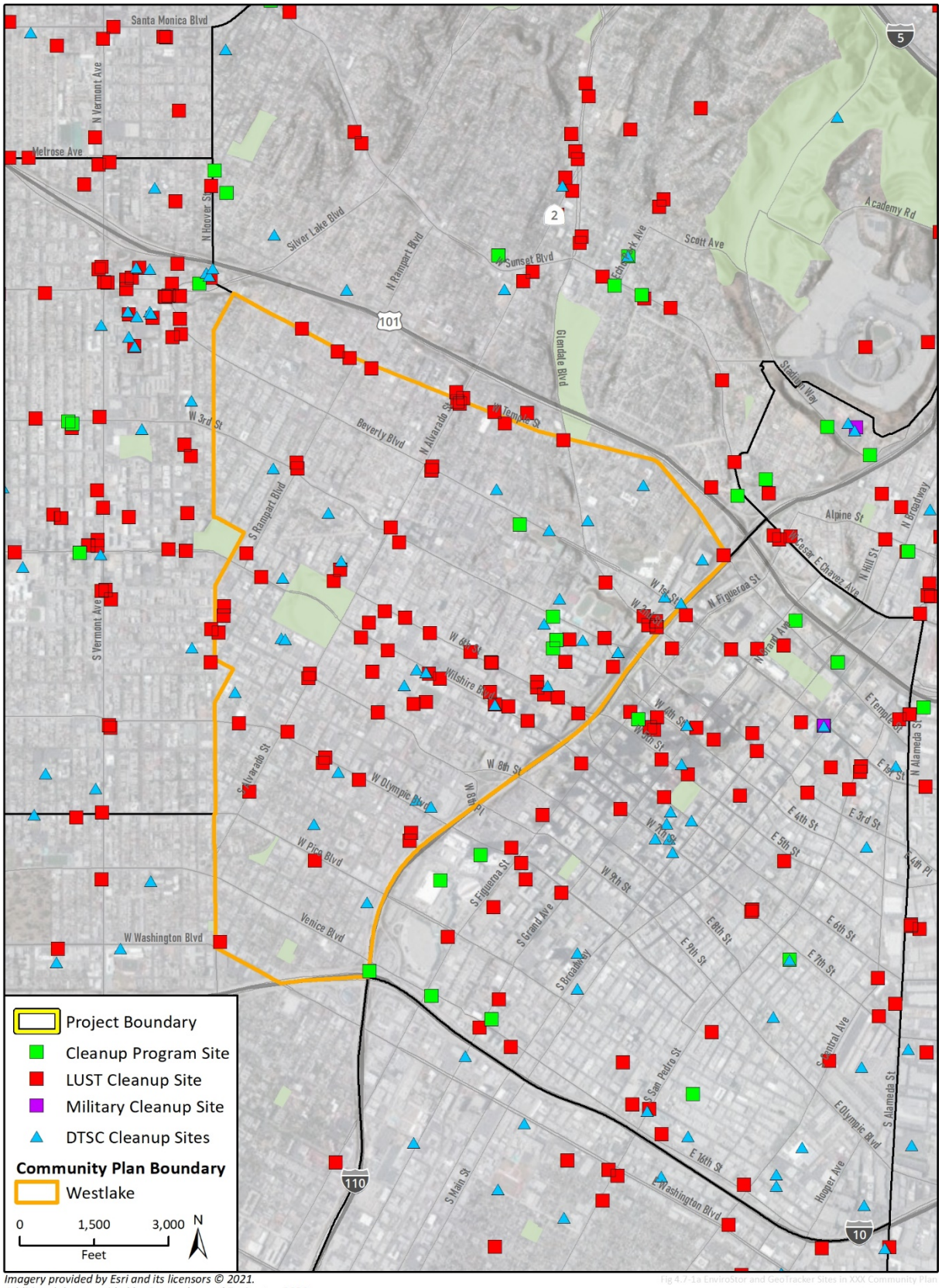
Additional data provided by Geotracker and Envirostor, 2021.

Fig 4.7-1a EnviroStor and GeoTracker Sites in XXX Community Plan

Figure 4.7-1gg Hazardous Waste Sites in the Westlake Community Plan Area



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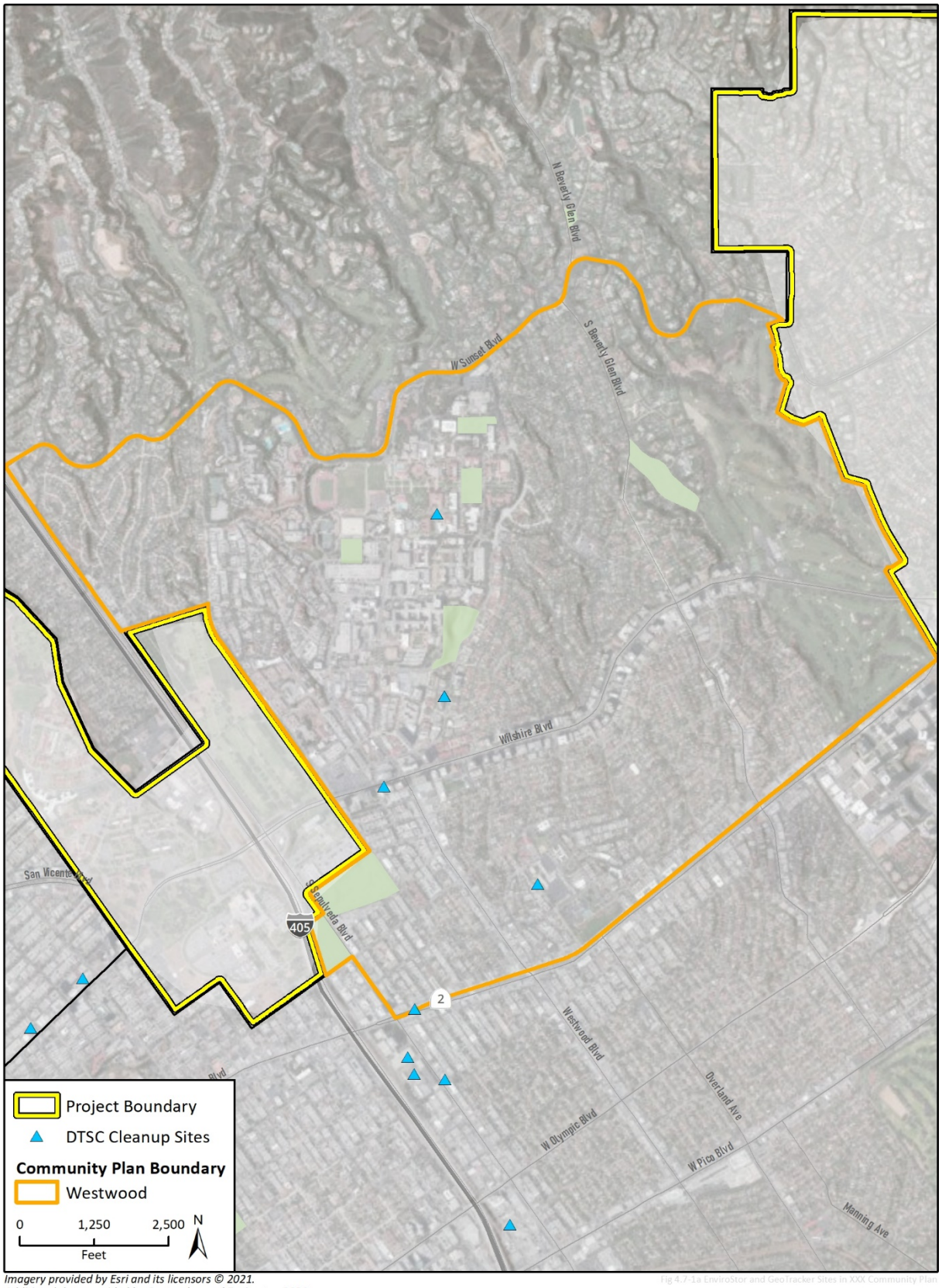
Additional data provided by Geotracker and Envirostor, 2021.

Fig 4.7-1a EnviroStor and GeoTracker Sites in XXX Community Plan

Figure 4.7-1hh Hazardous Waste Sites in the Westwood Community Plan Area



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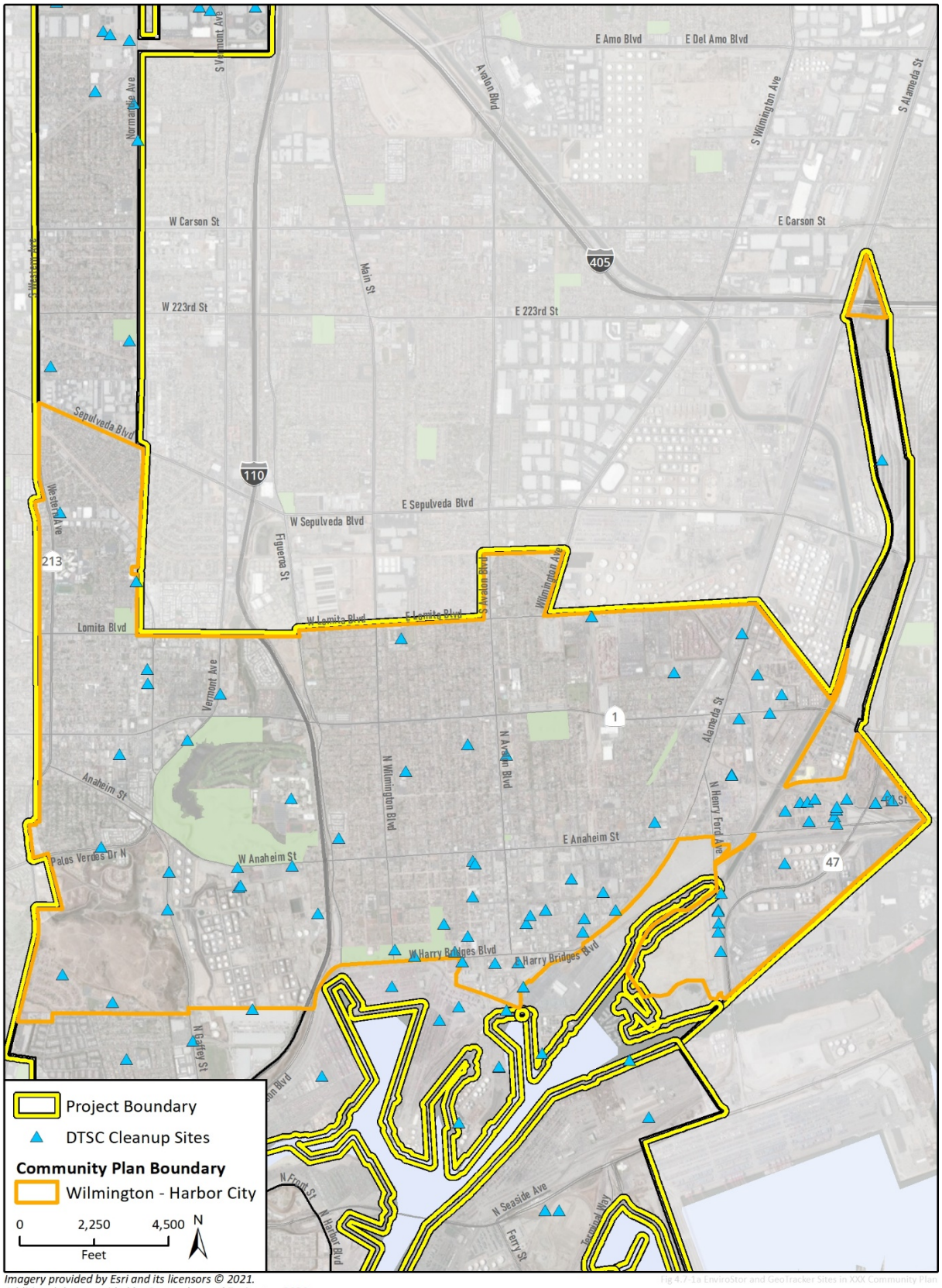
Additional data provided by Geotracker and Envirostor, 2021.

Fig 4.7-1a EnviroStor and GeoTracker Sites in XXX Community Plan

Figure 4.7-1ii Hazardous Waste Sites in the Wilmington – Harbor City Community Plan Area



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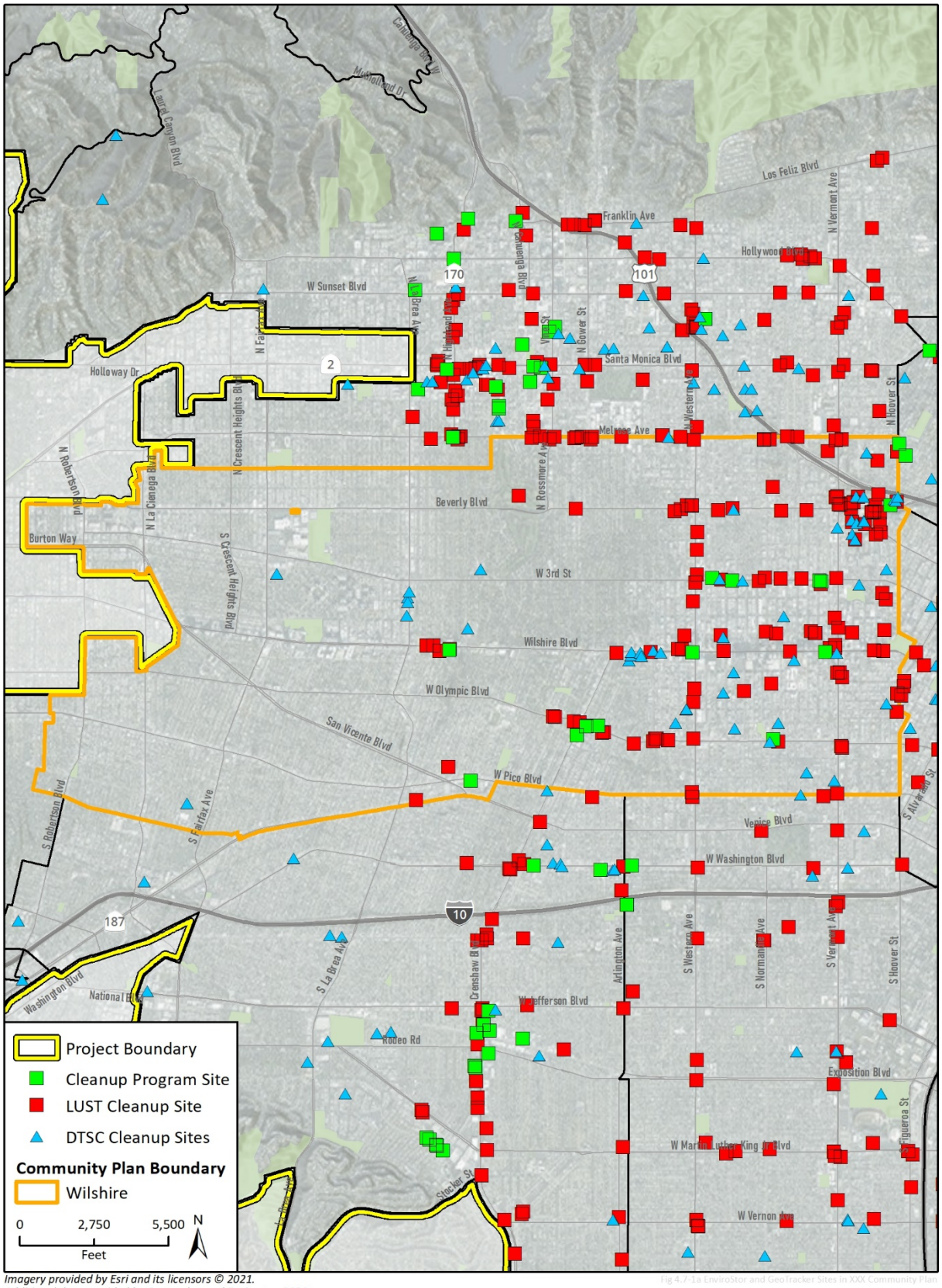
Additional data provided by Geotracker and Envirostor, 2021.

Fig 4.7-1a EnviroStor and GeoTracker Sites in XXX Community Plan

Figure 4.7-1jj Hazardous Waste Sites in the Wilshire Community Plan Area



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Additional data provided by Geotracker and Envirostor, 2021.

Fig 4.7-1a EnviroStor and GeoTracker Sites in XXX Community Plan

Use, Transport, and Abatement of Hazardous Materials

The use of hazardous materials is typically associated with industrial land uses. Activities, such as manufacturing, plating, cleaning, refining, and finishing, frequently involve chemicals that are considered hazardous when accidentally released into the environment. There are several clusters of low-intensity industrial uses scattered throughout the City (Figure 4.7-2).

To a lesser extent, hazardous materials may also be used at various commercial enterprises, as well as in residences. Dry cleaners, in particular, use cleaning agents considered to be hazardous materials. Hardware stores typically stock paints and solvents, as well as fertilizers, herbicides and pesticides. Swimming pool supply stores stock acids, algaecides, and caustic agents. Most commercial businesses occasionally use commonly available cleaning supplies that, when used in accordance with manufacturers' recommendations, are considered safe by the State of California, but when not handled properly can be considered hazardous. Private residences also use and store commonly available cleaning materials, paints, solvents, swimming pool and spa chemicals, as well as fertilizers, herbicides, and pesticides.

If improperly handled, hazardous materials can result in public health hazards through human contact with contaminated soils or groundwater, or through airborne releases in vapors, fumes, or dust. There is also the potential for accidental or unauthorized releases of hazardous materials that would pose a public health concern. The use, transport, and disposal of hazardous materials and wastes are required to occur in accordance with federal, State, and local regulations. In accordance with such regulations, the transport of hazardous materials and wastes can only occur with transporters who have received training and appropriate licensing. Additionally, hazardous waste transporters are required to complete and carry a hazardous waste manifest, which is a set of forms, reports, and procedures designed to track hazardous waste.

Figure 4.7-2 Industrial Areas in the City of Los Angeles

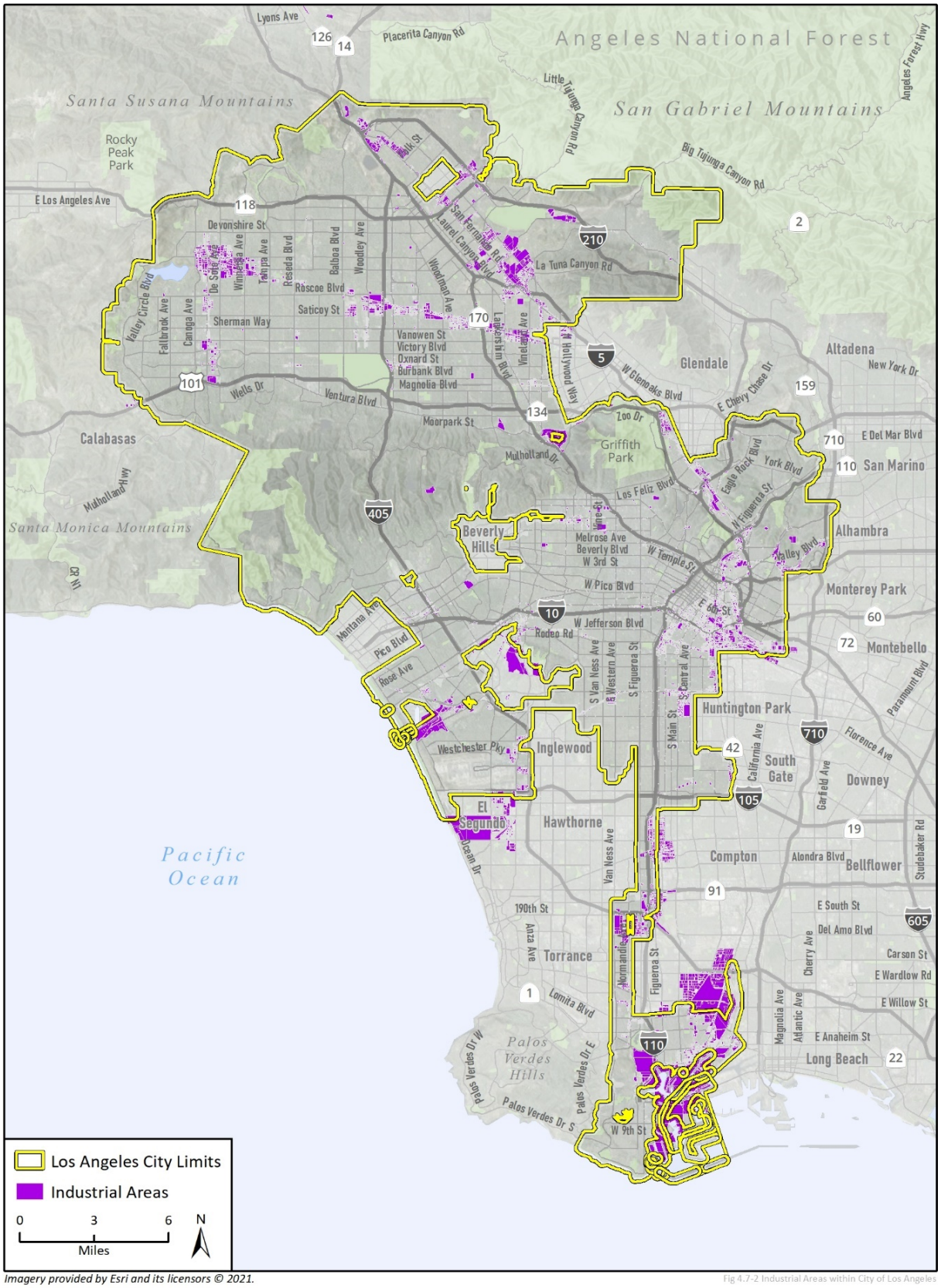


Fig 4.7-2 Industrial Areas within City of Los Angeles

Most transportation of hazardous materials through and in Los Angeles consist of trucks that traverse along freeways and major thoroughfares in the City, as well as along the railroad systems. The roadway network in the City includes seven freeways that traverse the 181 miles of the City and connect the City to its outer regions. They include Interstates 5, 10, 105, 110, 210, and 405, and US Highway 101. The City also includes 11 State highways (SR) including SR 1, 2, 47, 60, 90, 103, 110, 118, 134, 170, and 187. Railroads located within the City of Los Angeles include Metro, Amtrak, and Metrolink. Union Station, located in the Central City North Community Plan Area, serves as a terminal for local railroads in Los Angeles.

Oil Fields and Oil and Gas Wells

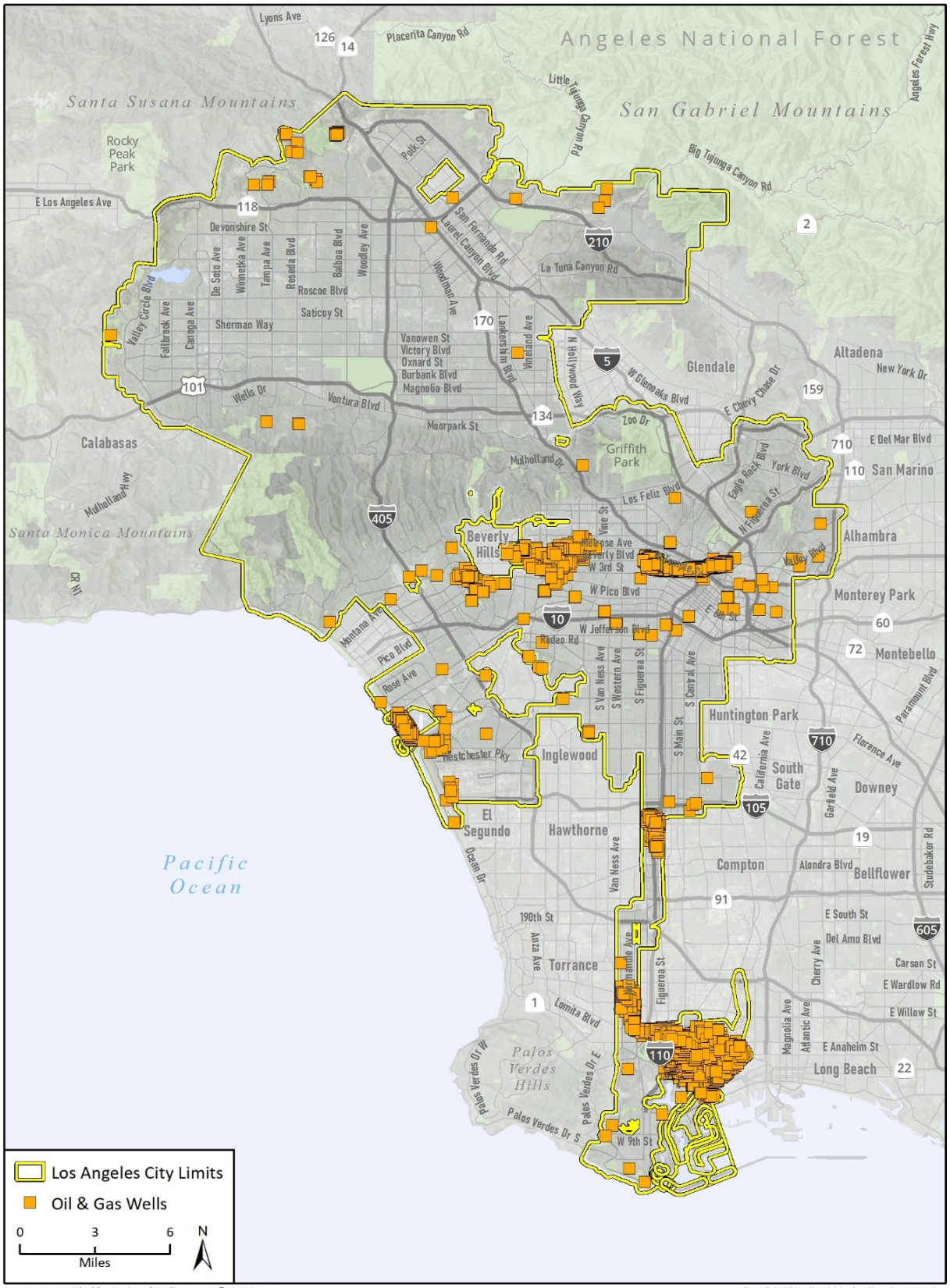
Oil fields and oil production activities present a variety of hazards in urbanized areas, including toxic air contaminants and dust from oil production, and the potential of contaminant release into an aquatic environment. Unconstrained oil seepage from oil fields and wells can contaminate the soil and groundwater aquifers. The fossil fuel industry played a substantial role in the City of Los Angeles' early development and remains the largest urban oil field in the country. There are 5,130 oil and gas wells in the City (City of Los Angeles 2018a). Of the total 5,130 wells, approximately 3,133 are plugged and abandoned, 930 are buried, 780 are active, and 287 are idle. Approximately 77 percent of active and idle wells in the City are operated by six companies. The City contains 23 oil fields, nine of which are located entirely in the City and 14 of which are located partially in the City and partially in adjacent cities (California Department of Conservation [CalGEM 2017]). The City's GeoHub interactive map for oil wells shows that there are wells throughout the City with large clusters in Chinatown, north Downtown, Westlake, Koreatown, Hancock Park, Fairfax, Marina Del Rey, Playa Vista, and San Pedro (GeoHub 2020). Figure 4.7-3 shows the oil wells within the City.

Methane Gas

Methane gas is produced by anaerobic decay of organic matter deep under the Earth's surface and is the major component of natural gas, about 87 percent by volume.[1] At room temperature and standard pressure, methane is a colorless, odorless gas. While not toxic, it is highly flammable and may form explosive mixtures with air. Methane is also an asphyxiant and may displace oxygen in an enclosed space; however, the concentrations at which flammable or explosive mixtures form are much lower than the concentration at which asphyxiation risk is significant. Thus, the main concern with methane gas is the risk of explosion if methane seeps and accumulates in an enclosed space with air (County of Los Angeles 2002).

[1] Anaerobic decay is the process by which microorganisms break down biodegradable material in the absence of oxygen.

Figure 4.7-3 Oil Wells in the City of Los Angeles



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Additional data provided by CalGEM, 2020.

Fig 4.7-3 Oil Wells within the City of Los Angeles

The City contains several oil fields with oil and gas production wells and wells outside of the oil fields. Oil deposits can be a source of methane seepage because the decomposition of organic matter that produces oil also produces a gas mixture containing methane that sits above the oil (International Institute for Applied Systems Analysis 2017). When oil is pumped to the surface, this gas layer also escapes. The City contains 23 oil fields, nine of which are located entirely within the City and 14 of which are located partially within the City and partially within adjacent cities. These areas, in addition to other areas that contain oil and gas wells that are not within an oil field, are designated by the City as Methane Zones and adjacent areas are designated as Methane Buffer Zones. Properties in these zones require mitigation for building projects and specific types of development are prohibited in proximity to oil well casings. Small Methane Zones are located throughout the City, larger Methane Zones are located in Pacoima, Boyle Heights, Playa Del Rey, Sawtelle, Wilmington, and a large swath throughout Mid-City from Cheviot Hills to Downtown (see Figure 4.7-4).

Schools

School locations require consideration because individuals particularly sensitive to hazardous materials{ XE "hazardous materials" } exposure use these facilities. Additional protective regulations apply to projects that could use or disturb potentially hazardous products near or at school{ XE "school" }s{ XE "schools" }. The California Public Resources Code requires projects that would be located within 0.25 mile of a school and might reasonably be expected to emit or handle hazardous materials to consult with the school district regarding potential hazards. Los Angeles Unified School District (LAUSD) is the second largest school district in the nation and serves over 600,000 students from kindergarten through 12th grade. The LAUSD boundary covers an area totaling 710 square miles, which includes most of the City, along with all or portions of 26 cities and unincorporated areas of Los Angeles County. The District includes 19 primary schools, 441 elementary schools, 79 middle schools, 92 high schools, 54 option schools, 53 Magnet schools, 25 multi-level schools, 13 special education schools, 2 home/hospital schools, 239 K-12 Magnet centers (i.e., Magnet schools within regular campuses), 228 charter schools, and 142 other schools and centers (LAUSD 2020) (see Figure 4.7-5).

Figure 4.7-4 Methane Zones and Methane Buffer Zones

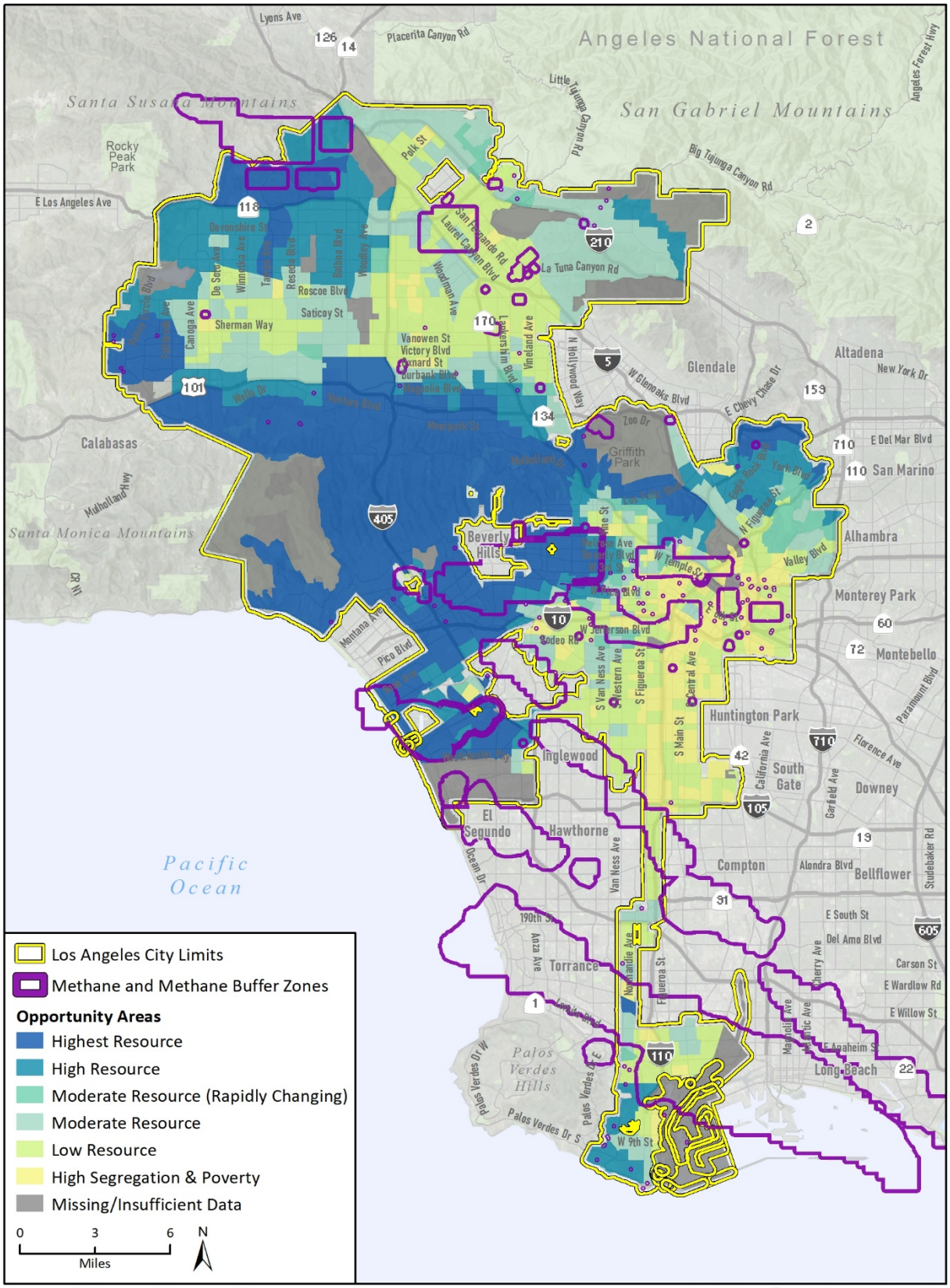

Figure 4.7-5 Schools in the City of Los Angeles

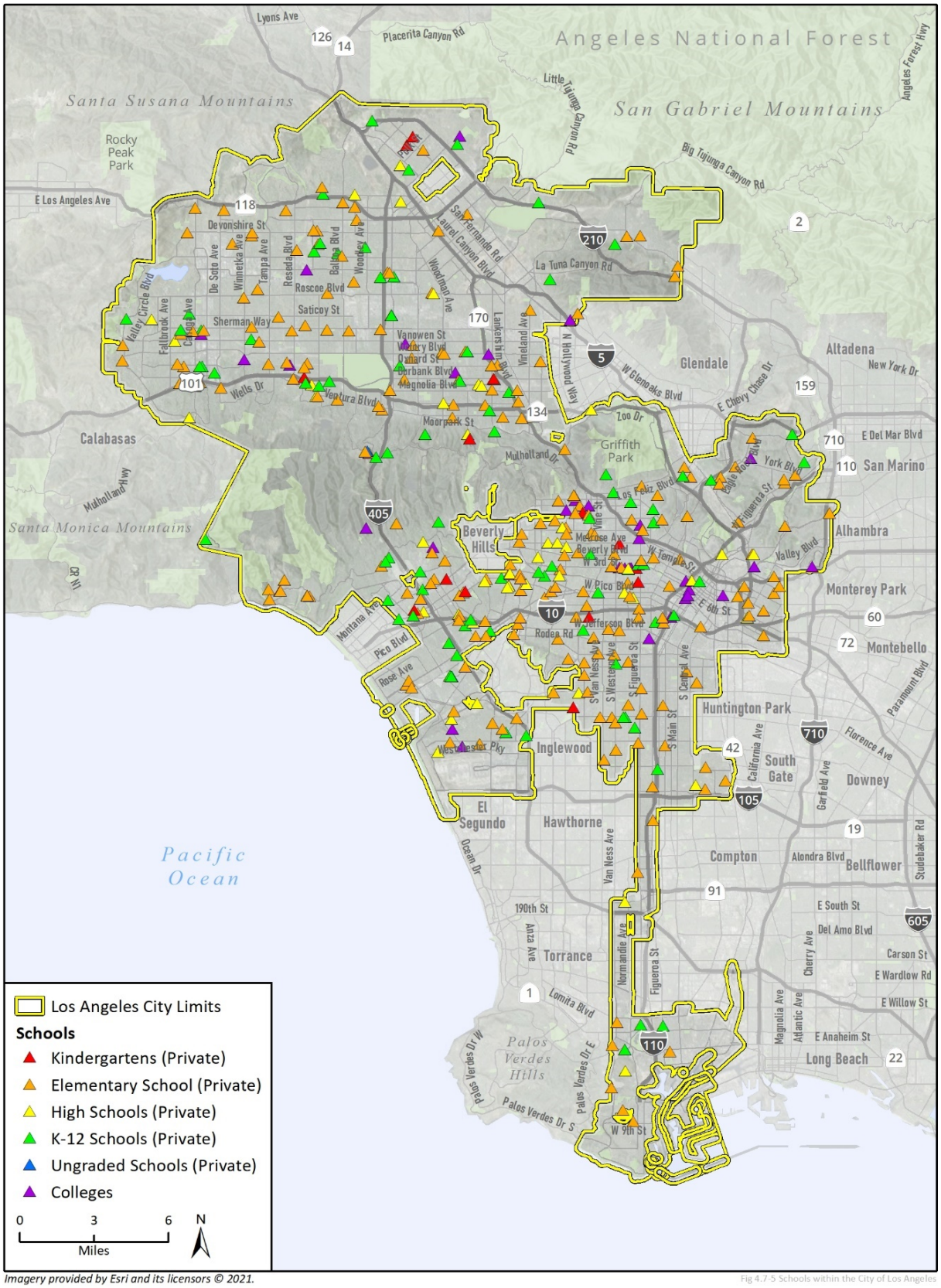

Fig 4.7-5 Schools within the City of Los Angeles

4.7.2 REGULATORY FRAMEWORK

Hazardous materials and waste can pose a potential hazard to human health and the environment when improperly treated, stored, transported, disposed of, or otherwise managed. Similarly, hazardous waste sites can also pose a potential hazard to human health and the environment (including animals and plants) if it is released, including into in the ground, surface water, or the air. As such the handling of hazardous materials and waste and the management and clean-up of hazardous waste sites are heavily regulated. Federal, State, and local programs that regulate the use, storage, and transportation of hazardous materials and hazardous waste or the clean up of contamination, including hazardous waste sites, are in place to prevent unwanted consequences. These regulatory programs are designed to reduce the risk that hazardous substances may pose to people, businesses, and the environment under both normal daily circumstances and as a result of emergencies or disasters.

Federal

Primary federal agencies with responsibility for hazardous materials management include the USEPA, U.S. Department of Labor's Occupational Safety and Health Administration (OSHA), the Federal Emergency Management Agency (FEMA), and U.S. Department of Transportation (USDOT).

U.S. Environmental Protection Agency

The USEPA's mission is to protect human health and the environment. USEPA takes action to reduce risks associated with exposure to chemicals in commerce, indoor and outdoor environments, and products and food. USEPA continues to oversee the introduction and use of pesticides, improve their Integrated Risk Information System (IRIS) program, reduce radon risks, identify and address children's health risks in schools and homes, and improve chemical management practices. Oversight of chemical storage and manufacturing in coordination with their interagency partners remains a key focus of USEPA, as well as efforts to reduce urban air toxins.

Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA)

Enacted in 1980, CERCLA, commonly known as Superfund, creates a tax on the chemical and petroleum industries and provides broad federal authority to respond directly to releases or threatened releases of hazardous substances that may endanger public health or the environment. The tax goes into a trust fund for cleaning up abandoned or uncontrolled hazardous waste sites. A summary of CERCLA is as follows:

- Established prohibitions and requirements concerning closed and abandoned hazardous waste sites;
- Provided for liability of persons responsible for releases of hazardous waste at these sites; and

- Established a trust fund to provide for cleanup when no responsible party could be identified.

CERCLA also established the Comprehensive Environmental Response, Compensation and Liability Information System (CERCLIS). The CERCLIS database was renamed to Standardized Emergency Management System (SEMS) by USEPA in 2015. SEMS is the USEPA's system for tracking potential hazardous-waste sites within the Superfund program. In addition, CERCLA authorizes two kinds of response actions:

- Short-term removals, where actions may be taken to address releases or threatened releases requiring prompt response; and
- Long-term remedial response actions that permanently and significantly reduce the dangers associated with releases or threats of releases of hazardous substances that are serious, but not immediately life threatening. These actions can be conducted only at sites listed on the USEPA's NPL.

CERCLA also enabled the revision of the National Contingency Plan (NCP), which provides guidelines and procedures needed to respond to releases and threatened releases of hazardous substances, pollutants, or contaminants. The NCP also established the NPL.

Disaster Mitigation Act of 2000

The Disaster Mitigation Act (42 United States Code [USC] §15121), which amends the Robert T. Stafford Disaster Relief Act of 1988 (42 USC §5121-5207), provides the legal basis for FEMA mitigation planning requirements for the State, local, and Indian Tribal governments as a condition of mitigation grant assistance. The Disaster Mitigation Act provides a new set of requirements that emphasize the need and create incentives for State, Tribal, and local agencies to closely coordinate mitigation and planning implementation efforts. This Act reinforces the importance of disaster infrastructure planning to reduce disaster losses nationwide and streamlines the administration of the federal disaster relief. In addition, this Act provides the framework for programs that promote mitigation activities. Some of the major provisions of this Act include:

- Funding of pre-disaster mitigation activities;
- Development of experimental multi-hazard maps to better understand risk;
- Establishment of state and local infrastructure mitigation planning requirements;
- Establishment of protocols for states to assume more responsibility in managing the Hazard Mitigation Grant Program (HMGP); and
- Adjustment of project funding for management costs.

The mitigation planning provisions outlined in Section 322 of this Act establish performance-based standards for mitigation plans and require states to have a public assistance program (Advance Infrastructure Mitigation [AIM]) to develop county government plans. The consequence for counties that fail to develop an infrastructure mitigation plan is the chance of a reduced federal share of damage assistance from 75 percent to 25 percent if the damaged facility has been damaged on more than one occasion in the preceding 10-year period by the same type of event.

Resource Conservation and Recovery Act

The Resource Conservation and Recovery Act (RCRA) of 1976 gives the USEPA the authority to control hazardous waste from "cradle-to-grave." This includes the generation, transportation, treatment, storage, and disposal of hazardous waste. RCRA also sets forth a framework for the management of non-hazardous solid wastes. The 1986 amendments to RCRA enabled USEPA to address environmental problems that could result from underground tanks storing petroleum and other hazardous substances.

Toxic Substances Control Act

Congress enacted the Toxic Substances Control Act (TSCA) of 1976, codified in Title 40 of the CFR, to give USEPA the ability to track the 75,000 industrial chemicals currently produced or imported into the United States. USEPA repeatedly screens these chemicals and can require reporting or testing of those that may pose an environmental or human-health hazard. USEPA can ban the manufacture and import of those chemicals that pose an unreasonable risk. More specifically, in California, PCBs are regulated by both State (RCRA and Title 22 of the California Code of Regulations) and federal (TSCA) rules. TSCA has banned the manufacture, processing, use, and distribution in commerce of PCBs. TSCA gives USEPA the authority to develop, implement and enforce regulations concerning the use, manufacture, cleanup, and disposal of PCBs. TSCA also establishes USEPA's Lead Abatement Program regulations, which provide a framework for lead abatement, risk assessment, and inspections. Those performing these services are required to be trained and certified by USEPA.[2]

U.S. Department of Transportation Regulations

U.S. Department of Transportation (USDOT) prescribes strict regulations for the safe transportation of hazardous materials, including requirements for hazardous waste containers and licensed haulers who transport hazardous waste on public roads. The Secretary of the USDOT receives the authority to regulate the transportation of hazardous materials from the Hazardous Materials Transportation Act (HMTA), as amended and codified in 49 U.S. Code (U.S.C.) Section 5101 et seq. The Secretary is authorized to issue regulations to implement the requirements of 49 U.S.C. The Pipeline and Hazardous Materials Safety

[2] U.S. Environmental Protection Agency, *40 CFR Park 745, Rules 402 and 404*, August 29, 1996.

Administration (PHMSA), formerly the Research and Special Provisions Administration, was delegated the responsibility to write the hazardous materials regulations, which are contained in Title 49 of the Code of Federal Regulations (CFR) Parts 100-180. Title 49 of the CFR, which contains the regulations set forth by the HMTA, specifies requirements and regulations with respect to the transport of hazardous materials. It requires that every employee who transports hazardous materials receive training to recognize and identify hazardous materials and become familiar with hazardous materials requirements. Under the HMTA, the Secretary "may authorize any officer, employee, or agent to enter upon, inspect, and examine, at reasonable times and in a reasonable manner, the records and properties of persons to the extent such records and properties relate to: (1) the manufacture, fabrication, marking, maintenance, reconditioning, repair, testing, or distribution of packages or containers for use by any 'person' in the transportation of hazardous materials in commerce; or (2) the transportation or shipment by any 'person' of hazardous materials in commerce."

Title 40 Code of Federal Regulations

Title 40 of the CFR Part 264 "Standards for Owners of Hazardous Waste Treatment, Storage and Disposal Facilities," establishes minimum national standards which define the acceptable management of hazardous waste. This standard applies to owners and operators of all facilities which treat, store, or dispose of hazardous waste.

Occupational Safety and Health Act of 1970

The U.S. Department of Labor's OSHA was created to assure safe and healthful working conditions by setting and enforcing standards and by providing training, outreach, education, and assistance. OSHA provides standards for general industry and construction industry on hazardous waste operations and emergency response. The Occupational Safety and Health Act, which is implemented by OSHA, contains provisions with respect to hazardous materials handling. Federal Occupational Safety and Health Act requirements, as set forth in Title 29 of the CFR Section 1910, et. seq., are designed to promote worker safety, worker training, and a worker's right-to-know. OSHA has delegated the authority to administer OSHA regulations to the State of California.

Title 49 of the CFR, which contains the regulations set forth by the Hazardous Materials Transportation Act of 1975, specifies additional requirements and regulations with respect to the transport of hazardous materials. Title 49 of the CFR requires that every employee who transports hazardous materials receive training to recognize and identify hazardous materials and become familiar with hazardous materials requirements. Drivers are also required to be trained in function and commodity specific requirements.

Research and Special Programs Administration

The Research and Special Programs Administration's (RSPA) regulations cover definition and classification of hazardous materials, communication of hazards to workers and the public, packaging and labeling requirements, operational rules for shippers, and training. They apply to interstate, intrastate, and foreign commerce by air, rail, ships, and motor vehicles, and also cover hazardous waste shipments. The Federal Highway Administration (FHWA) is responsible for highway routing of hazardous materials and highway safety permits. The U.S. Coast Guard regulates bulk transport by vessel. The hazardous material regulations include emergency response provisions, including incident reporting requirements. Reports of major incidents go to the National Response Center, which in turn is linked with CHEMTREC, a service of the chemical manufacturing industry that provides details on most chemicals shipped in the United States.

Other Hazardous Materials Regulations

In addition to the USDOT regulations for the safe transportation of hazardous materials, there are other applicable federal laws that also address hazardous materials:

- Community Environmental Response Facilitation Act (CERFA) of 1992
- Clean Water Act
- Clean Air Act
- Safe Drinking Water Act
- Atomic Energy Act
- Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA)

State Policies and Regulations

The primary State agencies with jurisdiction over hazardous chemical materials management are Cal EPA, DTSC and the Los Angeles Regional Water Quality Control Board (Los Angeles RWQCB). Other State agencies involved in hazardous materials management include California OSHA (Cal OSHA) and the State Office of Emergency Services (Cal OES).

Authority for statewide administration and enforcement of RCRA rests with Cal EPA DTSC. While DTSC has primary responsibility in regulating the generation, storage and disposal of hazardous materials, DTSC may further delegate enforcement authority to local jurisdictions. In addition, DTSC is responsible and/or provides oversight for contamination cleanup and administers statewide hazardous waste reduction programs. DTSC operates programs to accomplish the following: (1) manage the aftermath of improper hazardous waste management by overseeing site cleanups; (2) prevent releases of hazardous waste by

ensuring that those who generate, handle, transport, store, and dispose of wastes do so properly; and (3) evaluate soil, water, and air samples taken at sites.

The storage of hazardous materials in UST is regulated by the SWRCB, which delegates authority to the Regional Water Quality Control Board (RWQCB) on the regional level, and typically to the local fire department on the local level.

The Cal OSHA program is administered and enforced by the Division of Occupational Safety and Health (DOSH). Cal OSHA is similar to the federal OSHA program. For example, both programs contain rules and procedures related to exposure to hazardous materials during demolition and construction activities. In addition, Cal OSHA requires employers to implement a comprehensive, written Injury and Illness Prevention Program (IIPP). An IIPP is an employee safety program for potential workplace hazards, including those associated with hazardous materials.

The Cal OES Hazardous Materials (HazMat) section under the Fire and Rescue Division coordinates statewide implementation of hazardous materials accident prevention and emergency response programs for all types of hazardous materials incidents and threats. In response to any hazardous materials emergency, the HazMat section staff is called upon to provide state and local emergency managers with emergency coordination and technical assistance.

California Occupational Safety and Health Act – California Labor Code, Section 6300 et seq.

The California Occupational Safety and Health Act of 1973 addresses California employee working conditions, enables the enforcement of workplace standards, and provides for advancements in the field of occupational health and safety. The Act also created Cal OSHA, the primary agency responsible for worker safety in the handling and use of chemicals in the workplace. Cal OSHA's standards are generally more stringent than federal regulations. Under the former, the employer is required to monitor worker exposure to listed hazardous substances and notify workers of exposure. The regulations specify requirements for employee training, availability of safety equipment, accident-prevention programs, and hazardous substance exposure warnings. At sites known or suspected to be contaminated by hazardous materials, workers must have training in hazardous materials operations and a Site Health and Safety Plan must be prepared. The Health and Safety Plan establishes policies and procedures to protect workers and the public from exposure to potential hazards at the contaminated site.

California Health and Safety Code, Title 22, Chapter 20 Hazardous Waste Permit Program

Title 22, Chapter 20 Hazardous Waste Permit Program, establishes provisions for the issuance and administration of hazardous waste permits pursuant to the Health and Safety Code. Regulations cover

basic permitting requirements, such as application requirements, standard permit conditions, and monitoring and reporting requirements. Hazardous Waste Permits are required for the transfer, treatment, storage, and disposal of any waste which is hazardous waste pursuant to section 66261.3. Owners and operators of certain facilities require hazardous waste facility permits as well as permits under other programs for certain aspects of the facility operation.

California Health and Safety Code, Division 20, Chapter 6.5, Hazardous Waste Control Law

The California Health and Safety Code, Division 20, Chapter 6.5, Hazardous Waste Control Law regulates the safe disposal of hazardous wastes generated in California. The law identifies proper guidance for the handling, storage, use, and disposal of hazardous wastes. Additionally, the Hazardous Waste Control Law identifies the need for proper landfill disposal in order to reduce long-term threats to public health and to air and water quality.

Hazardous waste regulations establish criteria for identifying, packaging, and labeling hazardous wastes; dictate the management of hazardous waste; establish permit requirements for hazardous waste treatment, storage, disposal and transportation; and identify hazardous wastes that cannot be disposed of in landfills.

California Code of Regulations, Division 4.5, Title 22

California Health and Safety Code and Title 22 regulates processes that produce hazardous waste. The Regulation requires an ID number, regulates accumulation of onsite hazardous materials, shipping and transport, emergency procedures, and worker training.

California Code of Regulations Title 23, Chapter 15 Discharges of Hazardous Waste to Land Section 2511(b)

California Code of Regulations Title 23, Chapter 15 Discharges of Hazardous Waste to Land Section 2511(b) pertains to water quality aspects of waste discharge to land. The regulation establishes waste and site classifications and waste management requirements for waste treatment, storage, or disposal in landfills, surface impoundments, waste piles, and land treatment facilities. Requirements are minimum standards for proper management of each waste category, which allow regional water boards to impose more stringent requirements to accommodate regional and site-specific conditions. In addition, the requirements of California Code of Regulations Title 23, Chapter 15 applies to cleanup and abatement actions for unregulated discharges to land of hazardous waste (e.g. spills).

California Hazardous Materials Release Response Plan and Inventory Law of 1985

The California Hazardous Materials Release Response Plan and Inventory Law (California Health and Safety Code [HSC] Division 20, chapter 6.95) defines requirements to establish a business and area plan

relating to the handling and release of or threatened release of hazardous materials. This Law establishes a statewide environmental reporting system for these plans, which requires detailed information including location, type, quantity, and health risks of hazardous materials, handled, used, stored, or disposed of onsite. Such plans are required to be submitted to firefighters, health officials, planners, public safety officers, health care providers, regulatory agencies, and other interested persons. The purpose of these plans is to prevent or mitigate the damage to health and safety of persons and the environment from the release or threatened release of hazardous materials into the workplace and environment.

Hazardous Waste and Substances Sites (Cortese List)

The Hazardous Waste and Substances Sites (Cortese) List is a planning document used by the State, local agencies, and developers to comply with CEQA requirements in providing information about the location of hazardous materials release sites. Government Code §65962.5 requires the California Environmental Protection Agency (CalEPA) to develop at least annually an updated Cortese List. DTSC's Brownfields and Environmental Restoration Program (Cleanup Program) EnviroStor database provides DTSC's component of Cortese List data by identifying Annual Workplan (now referred to State Response and/or Federal Superfund), and Backlog sites listed under Health and Safety Code section 25356. In addition, DTSC's Cortese List includes Certified with Operation and Maintenance sites. Other State and local government agencies are required to provide additional hazardous material release information for the Cortese List.

Underground Storage Tanks Program

The Underground Storage Tank (UST) Program was launched to minimize and prevent environmental damage by requiring owners and operators of UST systems to install, verify functionality of, and maintain leak detecting equipment on their UST systems. A UST is a tank or combination of tanks and piping, located beneath the surface of the ground, that stores hazardous chemicals. The purpose of the UST program is to protect public health and safety, the environment, and the waters of the state, which are used for drinking, recreational purposes, crop irrigation, and more, from discharges and releases of hazardous substances from USTs.

Aboveground Petroleum Storage Act

The aboveground storage of petroleum statute was originally adopted in California in 1989 and administered by the SWRCB and RWQCB. On January 1, 2008, Assembly Bill 1130 transferred the responsibility for the implementation, enforcement, and administration of aboveground storage of petroleum to Unified Program Agencies (UPA). The CAL Fire-Office of the State Fire Marshal has oversight responsibility of this Act.

This Act regulates non-transportation related facilities with aggregate aboveground petroleum storage capacities of 1,320 gallons or more stored in aboveground storage containers, tanks, oil-filled equipment, or tank in an underground area with petroleum storage capacities of 55 gallons or greater. Under this Act, the term "petroleum" means crude oil, or a fraction thereof, that is a liquid at 60 degrees Fahrenheit and 14.7 pounds per square inch absolute pressure.

Lead Based Paint Regulations

In the state of California, there is a series of laws and regulations that residential property owners must abide by to avoid the dangers of lead. The Residential Lead-Based Paint Hazard Reduction Act of 1992 states that individuals must permanently remove lead-based paint hazards in accordance with federal standards. Additionally, testing must be conducted by certified lead testers for residential areas following removal.

Title 8 California Code of Regulations (CCR) Section 1532.1 was created for construction workers in the state of California. It is designed to protect workers from lead exposure and the dangers of the chemical. Construction workers must establish and implement a compliance program for Section 1532.1, and they need to provide a written Pre-Job Notification to the nearest Division of Occupational Safety and Health Cal/OSHA office 24 hours before the start of a project. Under California regulations, workers must assess the level of lead exposure on their job site, as well as regularly gauge lead levels as the project progresses. Failure to abide by any of Title 8 CCR Section 1532.1 can result in fines up to $70,000. Construction site management may also be responsible for medical removal payments to workers with high blood lead levels, as well as job shutdowns.

Safe Drinking Water Act

The Safe Drinking Water Act was established to protect the quality of drinking water in the U.S. This law focuses on all waters designated or potentially designated for drinking use, whether from aboveground or underground resources.

California Water Code

The California Water Code contains important provisions within the California Code of Regulations such as the Porter-Cologne Water Quality Act and the National Pollutant Discharge Elimination System (NPDES), all of which are intended to protect water quality in the state of California.

Public Resources Code Section 3229 for the California Geologic Energy Management Division

Public Resources Code (PRC) §3229 details provisions for tracking and abandoning oil wells. PRC §3229 states that, before commencing any work to abandon a well, the owner or operator shall file with the

supervisor or the district deputy a written notice of intention to abandon the well. Abandonment shall not proceed until approval is given by the supervisor or the district deputy. If the supervisor or the district deputy does not give the owner or operator a written response to the notice of intention within 10 working days, the proposed abandonment shall be deemed to have been approved and the notice of intention shall for the purposes of this chapter be deemed a written report of the supervisor. If abandonment operations have not commenced within one year of receipt of the notice of intention, the notice of intention shall be deemed canceled.

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 SEMS program (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 Emergency Managed Mutual Aid (EMMA) System below). California Emergency Management Agency (Cal-EMA) maintains oversight of the state's mutual aid system.

Emergency Managed Mutual Aid (EMMA) System

Cal OES developed the EMMA System in response to the 1994 Northridge Earthquake. The EMMA System coordinates emergency responses and recovery efforts along the coastal, inland, and southern regions of California. The purpose of EMMA is to provide emergency management personnel and technical specialists to afflicted jurisdictions in support of disaster operations during emergency events.

Objectives of the EMMA Plan is to provide a system to coordinate and mobilize assigned personnel, formal requests, assignment, training, and demobilization of assigned personnel. In addition, other objectives of the EMMA Plan is to establish a structure to maintain the EMMA Plan and its procedures, provide the coordination of training EMMA resources, including SEMS training, coursework, exercises, and disaster

response procedures, and to promote professionalism in emergency management response. The EMMA Plan was updated in November 2012 and supersedes the 1997 EMMA Plan and November 2001 EMMA Guidance.

License to Transport Hazardous Materials – California Vehicle Code, Section 32000.5 et seq.

The California Department of Transportation (Caltrans) regulates hazardous materials transportation on all interstate roads. Within California, the State agencies with primary responsibility for enforcing federal and State regulations and for responding to transportation emergencies are the California Highway Patrol and Caltrans. Together, federal and State agencies determine driver-training requirements, load labeling procedures, and container specifications for vehicles transporting hazardous materials.

California Fire Code, Title 24, Part 9, Chapters 33, 50 and 57

The 2013 California Fire Code, written by the California Building Standards Commission, is based on the 2012 International Fire Code (IFC). The IFC is a model code that regulates minimum fire safety requirements for new and existing buildings, facilities, storage and processes. The IFC addresses fire prevention, fire protection, life safety, and safe storage and use of hazardous materials in new and existing buildings, facilities, and processes.

Uniform Fire Code

The Uniform Fire Code, Article 80 (Section 80.103 of the Uniform Fire Code as adopted by the State Fire Marshal pursuant to Health and Safety Code Section 13143.9), includes specific requirements for the safe storage and handling of hazardous materials. These requirements are intended to reduce the potential for a release of hazardous materials and for mixing of incompatible chemicals, and specify the following specific design features to reduce the potential for a release of hazardous materials that could affect public health or the environment:

- Separation of incompatible materials with a noncombustible partition;
- Spill control in all storage, handling, and dispensing areas; and
- Separate secondary containment for each chemical storage system. The secondary containment must hold the entire contents of the tank, plus the volume of water needed to supply the fire suppression system for a period of 20 minutes in the event of catastrophic spill.

Regional

South Coast Air Quality Management District (SCAQMD) Rule 1166

SCAQMD Rule 1166, *Volatile Organic Compound Emissions from Decontamination of Soil*, requires that an approved mitigation plan be obtained from SCAQMD prior to commencing excavation of a UST; excavation of piping which has stored VOCs; excavation or grading of soil containing VOC material including gasoline, diesel, crude oil, lubricant, waste oil, adhesive, paint, stain, solvent, resin, monomer, and/or any other material containing VOCs; the handling or storage of VOC-contaminated soil at or from an excavation or grading site; or the treatment of VOC-contaminated soil at a facility.

SCAQMD Rule 1403

SCAQMD Rule 1403 establishes asbestos survey requirements, notification, and work practice requirements to prevent asbestos emissions from emanating during building renovation and demolition activities. Rule 1403 incorporates the requirements of the federal asbestos requirements found in the National Emission Standards for Hazardous Air Pollutants (NESHAP) found in CFR Title 40, Part 61, Subpart M. USEPA delegated SCAQMD the authority to enforce the federal asbestos NESHAP and SCAQMD is the local enforcement authority for asbestos.

Los Angeles County Airport Land Use Commission Comprehensive Land Use Plan (ALUC)

In Los Angeles County, the Regional Planning Commission has the responsibility for acting as the Airport Land Use Commission (ALUC) and for coordinating the airport planning of public agencies within the county. ALUC coordinates planning for the areas surrounding public use airports. The Los Angeles County Airport Land Use Plan (dually titled Comprehensive Land Use Plan) provides for the orderly expansion of Los Angeles County's public use airports and the area surrounding them. In formulating this plan, the Los Angeles County ALUC 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.

Los Angeles County Code

Sections 110.3, 110.4, and 110.5 of Title 26 of the Los Angeles County Code contains regulations pertaining to fills containing decomposable material, methane gas hazards, and contaminated soil hazards. The Gas Hazard Mitigation Policy and Standards contains the Implementation Policy and Standards for Sections 110.3, 110.4, and 110.5 (LACPW 2020). This policy lays out implementation policies for gas control and monitoring systems required in cases where vapor intrusion is identified as a concern.

Local

The primary local agency with responsibility for implementing federal and state laws and regulations pertaining to hazardous materials management is the Los Angeles County Health Department, Environmental Health Division. The Los Angeles County Health Department is the Certified Unified Program Agency (CUPA) for the County. A CUPA is a local agency that has been certified by CalEPA to implement the six state environmental programs within the local agency's jurisdiction. This program was established under the amendments to the California Health and Safety Code made by Senate Bill 1082 in 1994. The six consolidated programs are:

- Hazardous Materials Release Response Plan and Inventory (Business Plans)
- California Accidental Release Prevention (CalARP)
- Hazardous Waste (including Tiered Permitting)
- Underground Storage Tanks
- Above Ground Storage Tanks (Spill Prevention Control and Countermeasures [SPCC] requirements)
- Uniform Fire Code (UFC) Article 80 Hazardous Material Management Program (HMMP) and Hazardous Material Identification System (HMIS)

As the CUPA for the County, the Los Angeles County Health Department Environmental Health Division maintains the records regarding location and status of hazardous materials sites in the County and administers programs that regulate and enforce the transport, use, storage, manufacturing, and remediation of hazardous materials. By designating a CUPA, Los Angeles County has accurate and adequate information to plan for emergencies and/or disasters and to plan for public and firefighter safety.

A Participating Agency is a local agency that has been designated by the local CUPA to administer one or more Unified Programs within their jurisdiction on behalf of the CUPA. The Los Angeles County Health Department, Environmental Health Division has designated the Los Angeles Fire Department (LAFD) as a Participating Agency. The LAFD monitors the storage of hazardous materials in the City for compliance with local requirements. Specifically, businesses and facilities that store more than threshold quantities of hazardous materials as defined in California Health and Safety Code Chapter 6.95 are required to file an Accidental Risk Prevention Program with LAFD. This program includes information such as emergency contacts, phone numbers, facility information, chemical inventory, and hazardous materials handling and storage locations. LAFD also has the authority to administer and enforce federal and state laws and local ordinances for USTs. Plans for the construction/installation, modification, upgrade, and removal of USTs are reviewed by LAFD Inspectors.

2012 Los Angeles County NPDES Permit

Effective on December 28, 2012, the Los Angeles RWQCB adopted Order No. R4-2012-0175, National Pollutant Discharge Elimination System (NPDES) Permit No. CAS004001, Waste Discharge Requirements for Municipal Separate Storm Sewer System (MS4) Discharges into the Coastal Watersheds of Los Angeles County. The permit establishes new performance criteria for new development and redevelopment projects in the coastal watersheds of Los Angeles County (with the exception of the city of Long Beach). Storm water and non-storm water discharges consist of surface runoff generated from various land uses, which are conveyed via the municipal separate storm sewer system and ultimately discharged into surface waters throughout the region ("storm water" discharges are those that originate from precipitation events, while "non-storm water" discharges are all those that are transmitted through an MS4 Storm Water Permit and to do originate from precipitation events). Discharges of storm water and non-storm water from an MS4 permit, or storm drain systems, in the Coastal Watersheds of Los Angeles County convey pollutants to surface waters throughout the Los Angeles Region. Non-storm water discharges through an MS4 permit in the Los Angeles Region are prohibited unless authorized under an individual or general NPDES permit; these discharges are regulated by the Los Angeles County NPDES Permit, issued pursuant to CWA Section 402. Coverage under a general NPDES permit such as the Los Angeles County permit can be achieved through development and implementation of a project-specific Stormwater Pollution Prevention Plan (SWPPP) (Los Angeles RWQCB 2012).

County of Los Angeles Flood Control Act

The California State legislature adopted the County of Los Angeles Flood Control Act in 1915, establishing the Los Angeles County Flood Control District (LACFCD) and empowering it to provide flood protection, water conservation, recreation, and aesthetic enhancement within its boundaries. In August 2000, the Watershed Management Division of the Los Angeles County Department of Public Works became the planning and policy arm of the LACFCD. The District encompasses more than 3,000 square miles, 85 cities, and approximately 2.1 million land parcels. It includes a vast majority of drainage infrastructure in incorporated and unincorporated areas in every watershed, including 500 miles of open channels, 2,800 miles of underground storm drains, and an estimated 120,000 catch basins. The LACFCD regulates hydrologic and hydraulic design within its boundaries and provides criteria and planning procedures for flood plains, waterways, channels, and closed conduits in Los Angeles County.

Los Angeles County Operational Area Emergency Response Plan

The County of Los Angeles developed the Emergency Response Plan (ERP) to ensure the most effective allocation of resources for the maximum benefit and protection of the public in time of emergency. The ERP does not address normal day-to-day emergencies or the well-established and routine procedures

used in coping with them. Instead, the operational concepts reflected in this plan focus on potential large-scale disasters like extraordinary emergency situations associated with natural and man-made disasters and technological incidents which can generate unique situations requiring an unusual or extraordinary emergency response. The purpose of the ERP is to incorporate and coordinate all facilities and personnel of County government, along with the jurisdictional resources of the cities and special districts within the County, into an efficient Operational Area organization capable of responding to any emergency using a Standard Emergency Management System, mutual aid and other appropriate response procedures. The goal of the plan is to take effective life-safety measures and reduce property loss, provide for the rapid resumption of impacted businesses and community services, and provide accurate documentation and records required for cost-recovery.

Los Angeles Fire Department

The LAFD monitors the storage of hazardous materials in the City for compliance with local requirements. Specifically, businesses and facilities which store more than threshold quantities of hazardous materials as defined in Chapter 6.95 of the California Health and Safety Code are required to file an Accidental Risk Prevention Program with the LAFD. This program includes information such as emergency contacts, phone numbers, facility information, chemical inventory, and hazardous materials handling and storage locations. The LAFD also has delegated authority to administer and enforce federal and State laws and local ordinances for USTs. Plans for the construction/installation, modification, upgrade, and removal of USTs are reviewed by LAFD Inspectors.

Los Angeles Fire Code

Chapter V, Article 7 of the LAMC contains the Los Angeles Fire Code. The purpose of the Fire Code is to prescribe laws for the safeguarding of life and property from fire, explosion, panic, or other hazardous conditions that may arise in the use or occupancy of buildings, structures, or premises and other laws that may be the duty of LAFD to enforce.

City of Los Angeles Emergency Management Department

The City of Los Angeles Emergency Management Department (EMD) is comprised of four divisions and two units including administrative services division, communications division, community emergency management division, operations division, planning unit, and training exercise unit. The EMD works with City departments, municipalities and with community-based organizations to ensure that the City and its residents have the resources and information they need to prepare, respond, and recover from emergencies, disasters and significant events. The Emergency Operations Organization (EOO) is the operational department responsible for the City's emergency preparations (planning, training and mitigation),

response and recovery operations. The EOO centralizes command and information coordination to enable its unified chain-of-command to operate efficiently and effectively in managing the City's resources.

The Emergency Operation Center (EOC) is the focal point for coordination of the City's emergency planning, training, response and recovery efforts. EOC processes follow the National All-Hazards approach to major disasters such as fires, floods, earthquakes, acts of terrorism and large-scale events in the City that require involvement by multiple City departments.

City of Los Angeles Hazard Mitigation Plan

The City of Los Angeles has completed the 2017 Hazard Mitigation Plan (HMP) to lessen the vulnerability to disasters, and demonstrate the City's commitment to reducing risks from natural hazards. An HMP serves as a guide for decision makers as they commit City resources to minimize the effects of natural hazards. The HMP is intended to integrate with existing planning mechanisms such as building and zoning regulations, long-range planning mechanisms, and environmental planning. The planning process includes conducting a thorough hazard vulnerability analysis, creating community disaster mitigation priorities, and developing subsequent mitigation strategies and projects.

City of Los Angeles General Plan Safety and Conservation Elements

The Safety Element provides a contextual framework for understanding the relationship between hazard mitigation, response to a natural disaster, and initial recovery from a natural disaster. The Safety Element addresses hazardous materials relative to potential natural hazards.

The intent of the Conservation Element of the General Plan is the conservation and preservation of natural resources. Conservation Element policies address the conservation of petroleum resources (i.e., oil and gas) and appropriate, environmentally sensitive extraction of petroleum deposits to protect the petroleum resources for the use of future generations and to reduce the City's dependency on imported petroleum and petroleum products.

Policies from the Safety and Conservation Elements related to potential hazards and hazardous materials related to a project are listed in Table 4.7-1.

Table 4.7-1 Relevant General Plan Hazardous Materials Goals, Objectives and Policies

Safety Element – Hazard Mitigation	
Policy 1.1.1	Coordination. Coordinate information gathering, program formulation and program implementation between City agencies, other jurisdictions and appropriate public and private entities to achieve the maximum mutual benefit with the greatest efficiency of funds and staff.
Policy 1.1.2	Disruption reduction. Reduce, to the greatest extent feasible and within the resources available, potential critical facility, governmental functions, infrastructure and information resource disruption due to natural disaster.
Policy 1.1.3	Facility/systems maintenance. Provide redundancy (back-up) systems and strategies for continuation of adequate critical infrastructure systems and services so as to assure adequate circulation, communications, power, transportation, water and other services for emergency response in the event of disaster related systems disruptions.
Policy 1.1.4	Health/environmental protection. Protect the public and workers from the release of hazardous materials and protect City water supplies and resources from contamination resulting from accidental release or intrusion resulting from a disaster event, including protection of the environment and public from potential health and safety hazards associated with program implementation.
Policy 1.1.5	Risk reduction. Reduce potential risk hazards due to natural disaster to the greatest extent feasible within the resources available, including provision of information and training.
Safety Element – Emergency Response (Multi-Hazard)	
Policy 2.1.1	Coordination. Coordinate program formulation and implementation between City agencies, adjacent jurisdictions and appropriate private and public entities so as to achieve, to the greatest extent feasible and within the resources available, the maximum mutual benefit with the greatest efficiency of funds and staff.
Policy 2.1.2	Health and environmental protection. Develop and implement procedures to protect the environment and public, including animal control and care, to the greatest extent feasible within the resources available, from potential health and safety hazards associated with hazard mitigation and disaster recovery efforts.
Policy 2.1.3	Information. Develop and implement, within the resources available, training programs and informational materials designed to assist the general public in handling disaster situations in lieu of or until emergency personnel can provide assistance.
Policy 2.1.4	Interim procedures. Develop and implement pre-disaster plans for interim evacuation, sheltering and public aid for disaster victims displaced from homes and for disrupted businesses, within the resources available. Plans should include provisions to assist businesses, which provide significant services to the public and plans for reestablishment of the financial viability of the City.
Policy 2.1.5	Response. Develop, implement, and continue to improve the City's ability to respond to emergency events.
Policy 2.1.6	Standards/fire. Continue to maintain, enforce and upgrade requirements, procedures and standards to facilitate more effective fire suppression. The Fire Department and/or appropriate City agencies shall revise regulations or procedures to include the establishment of minimum standards for location and expansion of fire facilities, based upon fire flow requirements, intensity and type of land use, life hazard, occupancy and degree of hazard so as to provide adequate fire and emergency medical event response. At a minimum, site selection criteria should include the following standards which were contained in the 1979 General Plan Fire Protection and Prevention Plan: • Fire stations should be located along improved major or secondary highways. If, in a given service area, the only available site is on a local street, the site must be on a street which leads directly to an improved major or secondary highway.

	• Fire station properties should be situated so as to provide drive-thru capability for heavy fire apparatus. • If a fire station site is on the side of a street or highway where the flow of traffic is toward a signalized intersection, the site should be at least 200 feet from that intersection in order to avoid blockage during ingress and egress. The total number of companies which would be available for dispatch to first alarms would vary with the required fire flow and distance as follows: (a) less than 2,000 g.p.m. would require not less than 2 engine companies and 1 truck company; (b) 2,000 but less than 4,500 g.p.m., not less than 2 or 3 engine companies and 1 or 2 truck companies; and (c) 4,500 or more g.p.m., not less than 3 engine companies and 2 truck companies.
Safety Element – Disaster Recovery (Multi-Hazard)	
Policy 3.1.1	Coordination. Coordinate with each other, with other jurisdictions and with appropriate private and public entities prior to a disaster and to the greatest extent feasible within the resources available, to plan and establish disaster recovery programs and procedures which will enable cooperative ventures, reduce potential conflicts, minimize duplication and maximize the available funds and resources to the greatest mutual benefit following a disaster.
Policy 3.1.2	Health/safety/environment. Develop and establish procedures for identification and abatement of physical and health hazards which may result from a disaster. Provisions shall include measures for protecting workers, the public and the environment from contamination or other health and safety hazards associated with abatement, repair and reconstruction programs.
Policy 3.1.4	Interim services/systems. Develop and establish procedures prior to a disaster for immediate reestablishment and maintenance of damaged or interrupted essential infrastructure systems and services so as to provide communications, circulation, power, transportation, water and other necessities for movement of goods, provision of services and restoration of the economic and social life of the City and its environs pending permanent restoration of the damaged systems.
Policy 3.1.5	Restoration. Develop and establish prior to a disaster short- and long-term procedures for securing financial and other assistance, expediting assistance and permit processing and coordinating inspection and permitting activities so as to facilitate the rapid demolition of hazards and the repair, restoration and rebuilding, to a comparable or a better condition, those parts of the private and public sectors which were damaged or disrupted as a result of the disaster.
Conservation Element – Resource Management (Fossil Library) - Petroleum (Oil And Gas)	
Policy 1	Continue to encourage energy conservation and petroleum product reuse.
Policy 3	Continue to protect neighborhoods from potential accidents and subsidence associated with drilling, extraction and transport operations, consistent with California Department of Conservation, Division of Oil and Gas requirements.
Source: City of Los Angeles 1996 and 2001	

The Safety Element policies listed in Table 4.7-1 are being updated with the Proposed Project.

Los Angeles Municipal Code (LAMC)

One of the primary purposes of zoning is to segregate uses that are thought to be incompatible. With respect to hazards, the City uses zoning to separate businesses that use, store, transport, treat, or dispose of hazardous materials, or businesses that engage in potentially hazardous activities, such as manufacturing or refining, from residential areas and the general public.

The Methane Seepage Regulations, contained in LAMC Chapter IX, Article 1, Division 71 (Sections 91.7101 through 91.7109), establishes requirements for mitigation and other general building requirements to prevent potential environmental and harmful health effects that could be caused by the construction of buildings located in a defined Methane Hazard Zone in the City. All new buildings and paved areas located in a Methane Zone or Methane Buffer Zone must comply with the requirements of LAMC Sections 91.7103 and 91.7104 and the Methane Mitigation Standards established by the Superintendent of Building. The Methane Mitigation Standards identify installation procedures, design parameters and test protocols for the methane gas mitigation system. As established under LAMC Section 91.106.4.1, the Los Angeles Department of Building and Safety has the authority to withhold permits on projects located within a Methane Zone or Methane Buffer Zone. Building permits may be issued upon submittal of detailed plans that show adequate protection against flammable gas incursion by providing the installation of suitable methane mitigation and monitoring systems.

Section 91.7109.2 of the LAMC requires LAFD notification when an abandoned oil well is encountered during construction activities, and requires that any abandoned oil well not in compliance with existing regulations be re-abandoned in accordance with applicable rules and regulations of the California Geologic Energy Management Division (CalGEM).

The Planning and Land Use Management Committee of the City Council amended construction standards provided in Sub-subparagraph 14.00 A.13(g)(13)(iv) of the Proposed Permanent Supportive Housing Ordinance to include a new requirement for projects which involve soil disturbance on sites which have current or past use as an oil well or gas well, in addition to those which have current or past use as a gas station or dry cleaning facility. Existing Regulatory Compliance Measures are in place to ensure that oil and gas wells are appropriately abandoned to current legal standards, as monitored by the Department of Geologic Energy Management (CalGEM), prior to approval of a development project in the site. The Los Angeles Department of Building and Safety (LADBS) requires a construction site well review letter from CalGEM prior to issuance of building permits to ensure that all onsite wells are identified and have been abandoned to current legal standards. Abandonment is required to comply with State Oil and Gas laws with a permit from CalGEM and the Fire Department. Development around oil wells, including abandoned oil wells, must be cleared by the Fire Department to ensure health and safety of residents and the surrounding community prior to issuance of a building permit for the site by LADBS.

4.7.3 ENVIRONMENTAL IMPACTS

Thresholds of Significance

Thresholds of significance are based on the questions in Appendix G of the CEQA Guidelines. Hazards and hazardous materials impacts that may result from implementation of the Housing Element Update would be significant if the project would:

- **Threshold 4.7-1**: Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment
- **Threshold 4.7-2**: Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school
- **Threshold 4.7-3**: Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment
- **Threshold 4.7-4**: Expose people or structures, either directly or indirectly, to a significant risk of loss, injury, or death involving wildland fires (Analyzed in Section 4.17, *Wildfire*)

Methodology

This impact analysis addresses the potential to encounter hazardous substances during future construction of housing development accommodated by the Housing Element Update in the City, and the potential to create a significant hazard to the public or the environment. The evaluation was performed based on current conditions in the City, information in environmental databases, applicable regulations and guidelines, and future development activities that may have the potential to introduce hazards. Relationships and proximities of potential future development to schools were also identified.

Regulatory Compliance Measures

As shown in the Regulatory Setting above, the Federal, State and City have extensive regulations to reduce or eliminate risks related to hazardous materials. Among those, any future housing development under the Housing Element Update would be required to comply with the following RCMs:

- **RCM-HAZ-1 (Asbestos):** Pursuant to California Health and Safety Code Section 19827.5, a demolition permit is not to be issued by any city, county, city and county, or State or local agency which is authorized to issue demolition permits as to any building or other structure except upon the receipt from the permit applicant of evidence of asbestos notification to the Environmental Protection Agency

or SCAQMD or if the applicant declares that notification is not applicable to the demolition project. If ACMs are found to be present, ACMs shall be abated in compliance with SCAQMD Rule 1403, as well as all other applicable State and Federal rules and regulations.

- **RCM-HAZ-2 (Lead-Based Paint):** Should lead-based paint materials be identified in any buildings proposed for demolition or alteration, standard handling and disposal practices shall be conducted in compliance with California and Federal Occupational Safety and Health Administration (OSHA) and SCAQMD requirements. Only lead-based paint trained and certified abatement personnel shall be allowed to perform abatement activities onsite. All lead-based paint removed from onsite structures shall be hauled and disposed of by a transportation company certified to handle hazardous or regulated waste.
- **RCM-HAZ-3 (Polychlorinated Biphenyl):** Should polychlorinated biphenyls (PCBs) be identified in any buildings proposed for demolition or alteration, a qualified abatement contractor shall conduct a survey of the project site to identify and assist with compliance with applicable state and federal rules and regulation governing PCB removal and disposal.
- **RCM-HAZ-4: Explosion/Release (Methane Zone):** For a project site within a methane zone, prior to the issuance of a building permit, the site shall be independently analyzed by a qualified engineer, as defined in Ordinance No. 175,790 and Section 91.7102 of the LAMC, hired by the project applicant. The engineer shall investigate and design a methane mitigation system in compliance with the LADBS Methane Mitigation Standards for the appropriate Site Design Level which will prevent or retard potential methane gas seepage into the building. The project applicant shall implement the engineer's design recommendations subject to LADBS and LAFD plan review and approval.
- **RCM-HAZ-5 (Soil Gases):** Per 29 CFR Part 1926, Subpart P, during subsurface excavation activities, including borings, trenching and grading, OSHA worker safety measures shall be implemented as required to preclude any exposure of workers to unsafe levels of soil-gases, including, but not limited to, methane.
- **RCM-HAZ-6 (Removal of Underground Storage Tanks):** Underground Storage Tanks (USTs) shall be decommissioned or removed as determined by the LAFD UST Division. If any contamination is found, further remediation measures shall be developed with the assistance of the LAFD and other appropriate State agencies. Prior to issuance of a use of land or building permit, a letter certifying that remediation is complete from the appropriate agency (Department of Toxic Substance Control or the Regional Water Quality Control Board) shall be submitted to the decision maker.
- **RCM-HAZ-7 (Hazardous and Contaminated Materials):** If hazardous or contaminated materials are encountered during construction or geotechnical exploration, the project applicant shall contact the LAFD. The LAFD may provide oversight of remediation or refer the case to the appropriate County,

State, or federal agency depending on site specific conditions to ensure that all applicable regulatory requirements are adhered to.

- **RCM-HAZ-8 (Soil Vapor Mitigation):** If vapor intrusion is identified as a concern onsite and installation of a membrane or other sub-slab vapor barrier is recommended to prevent migration of soil vapor into the structures, the project applicant shall adhere to the Soil Gas Assessment and Mitigation prepared by Los Angeles County Department of Public Works Gas Hazard Mitigation Policy and Standards, updated February 3, 2020 (LACPW 2020). This policy is applicable to the requirements stated in the Los Angeles County Building Code Sections 110.3, 110.4, and 110.5.

Project Impacts and Mitigation Measures

Threshold 4.7-1	Would the Housing Element Update create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?

Impact 4.7-1 Housing development accommodated under the Housing Element Update involving the redevelopment, renovation, and demolition of structures built before 1979 could potentially release asbestos or lead into the atmosphere. In addition, housing development could potentially occur in Methane Zones and Methane Buffer Zones and near oil wells. Compliance with the comprehensive and extensive federal, State, and local requirements governing hazardous materials, including those identified in the regulatory compliance measures, would reduce this impact to PCBs, Lead and Asbestos, and Methane and Methane Hazards and oil wells to a ***less than significant*** level.

Demolition and/or renovation activities under the Housing Element Update would potentially encounter asbestos-containing materials (ACMs), lead-based paint (LBP), and/or polychlorinated biphenyls (PCBs), depending on the age of structures to be renovated or demolished. ACMs and LBP were widely used in structures built between 1945 and 1978. PCBs were widely used in structures built or renovated between 1950 and 1979. It is therefore reasonable to assume that these materials could be encountered during rehabilitation and demolition of structures built during this time period. Thus, site workers and neighboring properties could potentially be exposed to ACMs, LBP, or PCBs if these materials are not removed and properly disposed of prior to renovation or demolition. Impacts associated with soil contamination and the associated release of hazardous materials are analyzed under Impact 4.7-3 below.

The removal of ACMs and LBP is subject to federal, State, and local regulations. If ACMs and/or LBPs are discovered, a licensed asbestos and/or LBP/materials abatement contractor is required to be retained to

safely remove ACMs in accordance with Cal/OSHA regulations and SCAQMD Rule 1403 (Asbestos Emissions from Demolition/Renovation Activities) and/or lead-based paint in accordance with USEPA's Lead Abatement Program regulations under the TSCA. In addition, upon compliance with RCM-HAZ-1 and RCM-HAZ-2, noted above, demolition or alteration permits would not be issued without the required abatement procedures. Therefore, potential impacts related to the release of ACMs or LBP from housing development accommodated under the Housing Element Update would be less than significant.

Similarly, prior to any rehabilitation or demolition activities for housing development accommodated under the Housing Element Update, inspections for PCB-containing electrical features will be required. In California, USEPA enforces the federal regulations for PCB disposal and storage (under the TSCA), and DTSC administers and enforces the State's additional requirements for PCB hazardous waste (under RCRA). Mandatory compliance with Title 40 of the CFR and Title 22 of the California Code of Regulations would ensure that proper procedures are followed to minimize potential exposure to significant health hazards associated with PCBs. In addition, upon compliance with RCM-HAZ-3, noted above, demolition or alteration permits would not be issued without the required abatement procedures. Therefore, potential impacts related to the release of PCBs from housing development accommodated under the Housing Element Update would be ***less than significant***.

Large portions of the City are underlain by oil fields and oil and gas production wells and have been designated as Methane Zones or Methane Buffer Zones (City of Los Angeles 2004). As shown in Figure 4.7-3, these areas would overlap with housing development accommodated under the Housing Element Update, primarily in areas throughout Mid City and west Los Angeles neighborhoods. While not toxic, methane poses a hazard to humans because it is highly flammable and may form explosive mixtures with air. Methane is also an asphyxiant and may displace oxygen in an enclosed space; however, the concentrations at which flammable or explosive mixtures form are much lower than the concentration at which asphyxiation risk is significant. Thus, explosion due to the accumulation of methane in an enclosed area is the primary concern posed by methane. Upon implementation of RCM-HAZ-4, under LAMC Section 91.7101, and RCM-HAZ-5, new buildings in a Methane or Methane Buffer Zone are required to incorporate a menu of measures to control methane intrusion from geological sources. These menus include site testing for methane hazard, installation of a passive system for methane mitigation comprised of a de-watering system, sub-slab vent system, and impervious membrane that essentially facilitates release of methane in a manner where it can diffuse without harm; or installation of an active system comprised of a sub-slab system for mechanical extraction, a lowest occupied space system (includes a gas detection system, mechanical ventilation and alarm system), and a control panel. Therefore, potential impacts related to construction and operation of housing development in Methane or Methane Buffer Zones that could be accommodated under the Housing Element Update would be ***less than significant.***

The City also contains a number of active and inactive oil and gas production wells. Producing wells can emit air toxics and dust, while idle wells can be a potential source of soil and groundwater contamination if not properly plugged and abandoned. Impacts can occur if construction or operations on or near an oil well directly or indirectly, including by exacerbating conditions, cause the release of hazardous materials or toxic emissions from the oil well, whether active or inactive, such as grading activities damaging an abandoned well and causing methane to be released into the air or adjacent properties. As discussed in the Regulatory Setting above, prior to issuance of any grading or building permit, the Department of Building and Safety reviews ZIMAS, a geographical information database, for the presence of oil wells on site. If an oil well is present, the applicant is required to obtain a construction site well review (CSWR) letter from CalGEM to determine if there are wells on site, their location, and if they have been abandoned to current legal standards. If CalGEM identifies that a well has not been abandoned to current legal standards, LADBS will refer the matter to LAFD and require LAFD sign off prior to issuance of any permits to ensure health and safety is met and to ensure the Fire Code is met. In addition, in accordance with LAMC Section 91.7109.2, any abandoned oil well encountered during construction if not identified through the CalGEM CSWR letter process is required to be evaluated by the Fire Department and may be required to be re-abandoned in accordance with applicable rules and regulations of CalGEM. LAMC Section 91.6105 prohibits the development of specific uses and buildings in proximity to an oil well casing of an active well. These include schools, sanitariums, an assembly occupancy (i.e., gathering place for 50 or more people), fuel manufacturing plant, or public utility generating, receiving, or distributing electricity, and buildings more than 400 square feet in area and taller than 36 feet in height. No school hospital, or assembly occupancy shall be within 200 feet from the center of the oil well casing of an active well, no public utility fuel manufacturing plant or public utility electrical generating, receiving, or distribution plan shall be located within 200 feet from the center of the oil well casing, and no building more than 400 square feet in area and taller than 36 feet in height shall be erected within 50 feet from the center of an oil well casing. Generally, compliance with existing regulations would ensure that the implementation of the Housing Element Update would not create a significant hazard to the public or environment due to the release of hazardous materials associated with oil production wells. Therefore, impacts related to oil well hazards would be ***less than significant***.

As discussed in the Project description, the Housing Element Update will accommodate the following five types of residential developments: multi-family, single family, accessory dwelling units, mixed use, and conversion and rehabilitation. Unlike some of the other types of impacts, the impact from the release of hazardous materials is not as related to the types of housing units anticipated under the Housing Element Update, so much as the location of the housing units, including as location relates to the age of buildings that may need to be demolished. With that said, larger developments, such as large-scale multi-family developments or mixed use projects, may have the potential to result in more substantial impacts due to

their potential for more ground disturbing activities for subsurface parking and where there are greater demolition activities.

The potential for release of hazardous impacts identified above may be categorized into the following three situations: (1) demolition or alteration of structures containing asbestos, LBP, and/or PCBs; (2) development of residential projects within a Methane or Methane Buffer Zones; and (3) development in close proximity to an active or inactive oil and gas production well. None of the City's environmental or case studies of the housing projects reviewed for this EIR, shown in Table 4-2, had significant unavoidable impacts under this impact section. As discussed below, because of the existing regulations and RCMs, none identified the need for mitigation related to asbestos, LBP, or PCBs, which was not related to soil contamination (soil contamination is discussed in Impact 4.7-3).[3] A review of the environmental studies that identified the need for mitigation related to methane and/or oil wells demonstrates the mitigation is consistent with existing regulations. Those will be discussed below.

- **Demolition or alteration of structures containing asbestos, LBP, or PCBs**

  As listed in Table 4-2, the Crossroads Hollywood Project, a mixed-use project, involved the rehabilitation of the Crossroads of the World and former Hollywood Reporter building, demolition or relocation of all other existing buildings, and construction of eight mixed used buildings. Consistent with other environmental studies reviewed for this EIR, the Crossroads EIR found the project would not result in potential exposure to LCP, ACMs, and/or PCBs. It was determined that the existing regulatory framework was sufficient to reduce potential impacts to a less than significant level. As to asbestos, the Crossroads DEIR found:

  > *The properties within the Project Site were developed as early as 1921. Based on the age of several of building structures, asbestos or ACMs may be present. Furthermore, during the site reconnaissance, suspect ACMs were observed in the form of floor tiles, ceiling tiles, joint compound, and wallboard. Thus, in accordance with SCAQMD Rule 1403, the Project Applicant would be required to conduct a comprehensive asbestos survey prior to demolition, subject to approval by the Department of Building and Safety. In the event that ACMs are found within areas proposed for demolition, suspect materials would be removed by a certified asbestos abatement contractor in accordance with applicable regulations. With compliance with relevant regulations and requirements, Project construction activities would not expose people or schools to a substantial risk resulting from the release of asbestos fibers in the environment. Therefore, impacts related to*

[3] The Sunset Gordon EIR imposed measures related to lead and asbestos (incorporated from a 2007 EIR) but concluded the measures for lead and asbestos were "Code-required" measures. (See Sunset Gordon MMP at IV-33.)

ACMs would be less than significant, and no mitigation measures are required. (Crossroads DEIR at IV.F-30 to 31.)

As to Lead-Based Paint the Crossroads DEIR found:

…based on the age of the on-site buildings, it is possible that LBP was used on-site and could be present. During the site reconnaissance, the paint coating of the building structures ranged from fair to good condition. In the event that LBP is found within areas proposed for demolition, suspect materials would be removed in accordance with procedural requirements and regulations, including those established by the TSCA, 29 CFR Sections 1910 and 1926 et seq., and Titles 8 and 17 of the CCR, for the proper removal and disposal of LBP prior to demolition activities. Example procedural requirements include the use of respiratory protection devices while handling lead- containing materials, containment of lead or materials containing lead on the site or location at which construction activities are performed, and certification of all consultants and contractors conducting activities involving LBP or lead hazards. With compliance with relevant regulations and requirements, Project construction activities would not expose people or schools to a substantial risk resulting from the release of LBP into the environment. Therefore, impacts related to LBP would be less than significant, and no mitigation measures are required. (Crossroads DEIR at IV.F-31.)

As to PCBs the Crossroads DEIR found:

…, based on the age of the existing on-site structures, and the observation of fluorescent light fixtures during the site reconnaissance, on-site ballasts containing PCB concentrations above the federal account limit may be present. Therefore, in the event that PCBs are found within areas proposed for demolition, suspect materials would be removed in accordance with all applicable local, state and federal regulations prior to demolition activities, including but not limited to 40 CFR 761.30: "Fire Rule." Specifically, the disposal of PCB wastes is regulated by 40 CFR 761 to ensure the safe handling of these materials. With compliance with relevant regulations and requirements, Project construction activities would not expose people or schools to a substantial risk resulting from the release of PCBs in the environment. Therefore, impacts related to PCBs would be less than significant, and no mitigation measures are required.

This conclusion is consistent with the other environmental studies reviewed for this EIR (refer to Table 4-2).

- **Methane or Methane Buffer Zones**

  For the Olympic and Hill project, a 60-story mixed-use building with 700 dwelling units and 15,000 square feet of ground floor commercial in Downtown, the environmental assessment showed that the project was located on a methane zone. The LAMC required a Methane study and measures to be

imposed by LADBS. The SCEA for the project found less than significant impacts with the Code requirements:

> *The Project Site is located within a City of Los Angeles Methane Zone. Although the Project Site is located in a City-designated Methane Zone, oil and gas wells or pipelines were not identified on the Project Site during the visual inspection by AEC. … In accordance with the City's building code requirements, the Project Applicant was required to submit a Form 1- Certificate of Compliance for Methane Test Data. Methane Specialists tested the methane concentrations on the Project Site and prepared a Methane Report, dated April 21, 2017. Methane Specialists conducted shallow soil gas tests and installed multiple-depth gas probe sets where the highest concentrations of soil gases are expected to be found. The results found detectable levels of methane encountered while testing at the Project Site. The Project Site falls under Design Level III, with less than 2 inches of water-column gas-pressure. Therefore, as per Methane Code Table 1A, the Proposed Project required both passive and active methane mitigation systems. The Proposed Project would be required to implement design features and mitigation measures [note: "mitigation" here would mean existing regulatory compliance measures] required by the Department of Building and Safety for a Level III site to ensure that impacts related to methane would be less than significant. (Olympic and Hill SCEA at VI-64.)*

No mitigation was found necessary based upon the above analysis. This analysis was consistent for other environmental studies analyzed for this DEIR where the housing project was located in a methane zone and where methane was found present (refer to Table 4-2).

- **Oil Wells**

The Wilmington Apartments (1424 Deepwater) project, involved a 3-story, 51,202 square foot, 56 unit, 100% affordable housing project. It was located in the Wilmington community plan area, which is an area with significant oil activity. The environmental analysis for the project found based on a letter from DOGGR (former name for CalGEM), that seven wells were on site and one needed to be re-abandoned. A mitigation plan was developed by an environmental consultant and the plan was approved by the City's Petroleum Administrator. The following mitigation measures were imposed on the project:

> *MM-1 The Applicant shall perform exploratory excavation to locate the seven potential abandoned oil wells located on the site.*

> *MM-2 The Applicant shall prepare and submit to DOGGR an Application for Construction Site Well Review and Notice(s) of Intention for any of the seven potential abandoned oil wells at the Site that a) DOGGR finds do not meet current abandonment standards or b) require lowering/raising to be at an acceptable depth below finished grade.*

MM-3 The Applicant shall prepare a design for a methane mitigation system to be installed beneath the proposed building. The design shall conform to the provisions of the City of Los Angeles Ordinance No. 175,790 and applicable methane mitigation standards of the Los Angeles Department of Building and Safety.

MM-4 The Applicant shall abandon any oil wells identified at the site during the exploratory excavation according to the permit requirements of DOGGR. Some grading may need to be performed before well abandonment to allow access to the well(s) and room for well drilling and associate equipment.

MM-5 The Applicant shall install a Passive System regardless of the design methane concentration or the design methane pressures. The Passive System for this project shall include at minimum:

- *A standard de-watering system;*
- *Sub-slab vapor collection and ventilation system that includes:*
    - *Perforated horizontal collection piping;*
    - *Permeable gravel blanket for soil gas migration of a minimum 2" thick;*
    - *Solid vent risers (amount and size are dependent on building size);*
    - *A complete impervious membrane (barrier) system. Since there are known oil wells on site, this barrier system will be a chemically compatible spray-applies product that covers the entire footprint of the proposed structure;*
    - *Trench dams and conduit seal fittings.*

MM-6 The Applicant shall conduct a subsurface methane investigation in accordance with Los Angeles Department of Building and Safety Document No. P/BC 2014- 101 Site Testing Standards for Methane. The subsurface methane investigation shall include but is not limited to:

- *Installation of three to four (3-4) gas probes set throughout the Site;*
- *Gas Probe Sets include probes at approximate depths of 5, 10, and 20 feet below ground surface or the lowest building slab elevation;*
- *Collection of methane soil gas and pressure measurements in the field.*

The purpose of the subsurface methane investigation is to determine the level of methane concentrations that exist at the site, and the level of methane pressure (in inches water pressure) that exist at the site. The Applicant shall install an Active System and miscellaneous systems subject to the approval of the Los Angeles Department of Building and Safety (LADBS), including:

- *An active mechanical extraction system (i.e., a fan pulling sub-slab air as opposed to active);*
- *Gas detection, alarm, and mechanical ventilation system on the lowest occupied spaces;*

- *A control panel for active /mechanical components;*
- *Additional vent risers.*

MM-7 The Applicant shall locate, survey, and leak test each oil well. Further, should the development proceed, each well will receive ventilation and protection, including but not limited to:

- *Locate: Each well must be located to verify that it is or is not within the Site boundaries;*
- *Survey: Each well must be surveyed, both horizontally and vertically, to provide the exact location of this well on the Site and its depth;*
- *Leak Tested: Following exposure, the top casing of each well must be leak tested in the field for excessive methane levels, with DOGGR personnel present to verify. If a well is determined to be leaking, reabandonment activities are likely necessary;*
- *Ventilation and protection: Each oil well that is to current abandonment standards, will require that a protection and ventilation cone be placed over the well cap (head). Attached to the vent cone will be a solid pipe vent riser that will terminate above breathing levels. This ventilation is a precautionary measure should the well ever begin to leak.*

With the imposition of the mitigation and a Phase I that found no risk to groundwater from the oil wells, the project was found to have less than significant impacts related to the oil wells (1424 Deepwater MND at 51). The mitigation measures imposed with the Wilmington Apartments project are consistent with the state and City's regulatory process, including the requirement to get a site well review letter, complying with the City's requirements for vapor barriers over methane hazards, as well requiring abandonment to legal standards.

Based on all of the above, compliance with existing RCMs, particularly RCM-HAZ-1, RCM-HAZ-2, RCM-HAZ-3, and RCM-HAZ-5, as well as compliance with LAMC sections 91.6105 and 91.7109.2 would ensure that the implementation of the Housing Element Update in each type of housing project would not create a significant hazard to the public or environment resulting from the release of hazardous materials including asbestos, lead, and PCBs. Additionally, compliance with existing RCMs, particularly RCM-HAZ-4 would ensure that the implementation of the Housing Element Update in each type of housing project would not create a significant hazard to the public or environment for projects within the methane and methane buffer zones or on or near oil wells or oil fields. Impacts would be ***less than significant***.

Mitigation Measures

No significant impact would occur due to existing regulations and RCMs; therefore, mitigation is not required for housing development accommodated under the Housing Element Update.

Threshold 4.7.2	Would the Housing Element Update emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within 0.25 mile of an existing or proposed school?

Impact 4.7-2 Housing development accommodated under the Housing Element Update would emphasize new residential development. Although new housing development could occur within 0.25 mile of existing schools, such development would not involve the use of large quantities of hazardous materials and would not be expected to create hazards associated with hazardous materials use. Housing development accommodated under the Housing Element Update may involve construction activities on sites that may contain asbestos, LBP, be located near oil wells or methane zones and/or contaminated soils, which could pose hazards to nearby schools in the case of an accidental release. Impacts related to LBP, VOC, PCB, methane or oil wells will be ***less than significant*** based on existing regulatory schemes. Impacts related to hazardous emissions and handling of hazardous and acutely hazardous materials, substances or waste related to contaminated soils remain ***significant and unavoidable*** after implementation of mitigation.

Educational facilities (defined as colleges, high schools, elementary schools, preschools, or nursery schools) are located throughout the City, including in areas where housing development under the Housing Element Update would occur. As noted in the setting above, LAUSD operates 448 elementary schools, 81 middle schools, 94 senior high schools, 54 option schools, 49 Magnet schools, 25 multi-level schools, 13 special education schools, 2 home/hospital schools, 177 K-12 Magnet centers, 224 charter schools, and 120 other schools and centers serving a population of approximately 4.8 million people (LAUSD 2020). Housing development accommodated under the Housing Element Update, including construction activities associated with that development, would occur within 0.25 miles of these schools. Figure 3-5 in Section 3, *Project Description*, depicts the High and Highest Resources Areas, which encompass likely areas to be rezoned.

Although housing development accommodated under the Housing Element Update would not involve direct handling or emissions of hazardous materials within 0.25 mile of schools, construction activities associated with housing development could pose hazards to nearby schools in the case of an accidental release of hazardous materials. Generally, all development activities are required to comply with applicable local, State, and federal laws and regulations, which would control the response to hazardous waste, transport, storage, disposal, and clean-up in order to ensure that hazardous materials do not pose a significant risk to nearby receptors.

Construction of the housing projects would involve the temporary use of hazardous substances in the form of paint, adhesives, surface coatings and other finishing materials, and cleaning agents, fuels, and oils typically used in construction. However, all such substances and materials would be used, stored, and disposed of in accordance with applicable laws and regulations and manufacturers' instructions. To ensure that workers and others at individual development sites in the City are not exposed to unacceptable levels of risk associated with the use and handling of hazardous materials, employers and businesses are required to implement existing hazardous materials regulations, with compliance monitored by the State (e.g., OSHA in the workplace or DTSC for hazardous waste) and the City. Similarly, housing development accommodated by the Housing Element Update would be required to comply with applicable federal, State, and local environmental regulations related to new construction and hazardous materials storage, use and transport. California Health and Safety Code Chapter 6.95 "Hazardous Materials Release Response Plans and Inventory" requires businesses that handle more than a specified amount of hazardous materials to submit a Hazardous Materials Business Plan. Such businesses are required to provide emergency response plans and procedures, training program information, and a hazardous material chemical inventory disclosing hazardous materials stored, used, or handled. In addition, various federal, State, and local regulations and guidelines pertaining to abatement of, and protection from, exposure to asbestos, lead, and other hazardous materials have been adopted for demolition activities and would apply to all new development. Demolition that could result in the release of lead and/or asbestos must be conducted according to Cal/OSHA standards. Compliance with existing regulations would ensure that schools and the general public would not be exposed to any unusual or excessive risks related to hazardous materials during construction and operational activities.

As discussed in the environmental setting, soil contamination is found throughout the City, including from OCPs from historical agricultural uses, VOCs from industrial uses, and PCBs from historical industrial use. The presence of soil contamination on a construction site of a housing project could result in hazardous emissions or the handling of hazardous materials or waste. As previously discussed, GeoTracker and EnviroStor identifies the locations of hazardous material sites City wide. As discussed in detail under Impact 4.7-3, a process to identify and, as necessary, remediate soil and/or groundwater contamination exists and would normally address such hazards. However, because there is not a specific legal requirement to undertake a preliminary investigation to determine the possible presence of hazardous material contamination, it is possible that such contaminants could be overlooked. This could result in the release of hazardous materials during excavation and grading of individual construction sites. If within 0.25 mile of a school, such releases could have significant health and safety effects on school-aged children. Impacts would be *potentially significant.*

Similarly, the impacts related to asbestos, lead, PCBs, methane, and oil wells, identified in Impact 4.7-1, if occurring near a school would have similar impacts to those discussed in Impact 4.7-1. The impacts would be *less than significant*.

Unlike some of the other types of impacts, the impact from hazardous emissions or the handling of hazardous or acutely hazardous materials, substances, and waste near schools is not as related to the types of housing units (i.e., multi-family, single family, ADU, mixed use, conversion and rehab) anticipated under the Housing Element Update, so much as the location of the housing units, including as location relates to the age of buildings that may need to be demolished or remodeled. With that said, larger developments, such as large-scale multi-family developments or mixed use projects, may have the potential to result in more substantial impacts due to their greater scale and larger overall footprint. In particular, those spanning multiple parcels with varying historical uses have the potential to encompass and thus, directly affect, a subsurface with historical impacts. However, the following likely potential impacts related to hazardous materials near schools could occur for any size or type of housing project: (1) construction activities on sites that may contain asbestos, LBP, methane, or where an oil well is present; and (2) development of housing projects on sites that have soil contamination with PCBs, OCPs, VOCs, amongst others.

The City's environmental case studies for housing projects reviewed for this EIR (Table 4-2) show that generally impacts from housing related to hazardous emissions or the handling of hazardous materials, substances and waste near schools are similar to impacts in Impacts 4.7-1 and 4.7-3. Only one of the 53 case study projects identified mitigation specific to this threshold not related to soil contamination. However, a review of the mitigation measure for the Sapphire project, demonstrates that it was not identified as necessary to address the potential for hazardous emissions or the handling of hazardous materials, substances or waste. The measure imposed a noticing requirement that the project applicant provide notices to the nearby school and develop construction plans related to transportation and noise impacts. The EIR concluded that impacts from the handling of hazardous waste would be less than significant based on existing regulations and the prior hazardous contamination was abated to necessary standards to reduce associated impacts to nearby schools to be less than significant (Sapphire DEIR at IV.F-17).

The 1045 Olive project demonstrates the typical identified impact and mitigation that could occur related to this impact question. The 1045 Olive project involved a 70-story mixed use high rise in Downtown with 794 residential units and 12,504 square feet of ground-floor commercial, and the excavation and export of 80,520 cubic yards of soil. It also involved the demolition of five existing single-story commercial buildings. The 1045 Olive project was located within .17 miles of an early education center and a child care and development council. The EIR concluded that there would be less than significant impacts related to emission or handling hazardous materials near the schools except for soil contamination that had

previously been remediated. In the 1045 Olive EIR in the impact analysis for the impact threshold for this EIR's 4.7-1 threshold, found that testing on site had identified low levels of PCE and BTEX, which were below the USEPA screening criteria. The EIR concluded that although the levels tested below screening levels, "to avoid the risk of potentially impacted or impacted soils that may be encountered at the Project site during construction, they would impose HAZ-MM-1 to require a soil mitigation plan" (1024 Olive Project EIR at IV.G-24). In the impact question for hazards related to school, the EIR made the following finding:

> *…the discussion of impacts for Threshold b, above, identifies materials at the Project Site that could potentially be released due to construction activity. The potential threat from such release would be primarily confined to the Project Site and its immediately adjacent area. However, a truck hauling contaminated material from the Project Site could pose a threat to the nearby schools if the hazardous materials were not properly secured. To minimize the risk associated with impacted soils that may be encountered at the Project Site during grading and excavation activities, HAZ-MM-1, [imposed on the impact criteria for Threshold b], includes the preparation of a SMP to protect the safe transit of hazardous materials. The SMP would include guidance to contractors for appropriate screening, and management of potentially impacted or impacted soils that may be encountered during grading and excavation activities. As such, construction of the Project would not expose schools within one-quarter mile to hazardous emissions or to the effects of handling of hazardous or acutely hazardous materials, substances, or waste. Therefore, with implementation of HAZ-MM-1, potentially significant impacts would be avoided (1045 Olive Project DEIR at IV.G-26).*

The MMP for the 1024 Olive project EIR included the following mitigation measures:

> *HAZ-MM-1: A Soil Management Plan (SMP) shall be prepared that would provide guidance to contractors for appropriate handling, screening, and management of potentially impacted or impacted soils from historical operations that may be encountered at the Project Site during grading and excavation activities. These procedures would include training for construction personnel on the appropriate procedures for identification of suspected impacted soils; requirements for testing and collection of potentially contaminated soils; segregation of potentially impacted soils; and applicable soil handling and disposal procedures. The SMP shall also contain procedures to be followed in the event that undocumented subsurface features of potential environmental concern (e.g., USTs, abandoned oil wells, sumps, hydraulic lifts, clarifiers, buried drums) are encountered during the excavation grading, and/or other earthmoving activities. These procedures would include safety training, testing protocols, decontamination and decommission standards, and notification to the appropriate relevant regulatory oversight agency or agencies.*
>
> *The SMP would also include procedures for handling and transportation of soils with respect to nearby sensitive receptors, such as nearby residential uses, religious uses, and schools. In accordance with*

SCAQMD Rule 1166 requirements, impacted soil removed from the Project Site shall comply with the following:

- *Be transported to an approved treatment/disposal facility.*
- *When loading into trucks is completed, and during transportation, no excavated material shall extend above the sides or rear of the truck or trailer.*
- *Prior to covering/tarping, loaded impacted soil shall be wetted by spraying with dust inhibitors.*
- *The trucks or trailers shall be completely covered/tarped prior to leaving the Project Site to prevent particulate emissions to the atmosphere.*
- *The exterior of the trucks (including the tires) shall be cleaned off prior to the trucks leaving the excavation location.*

HAZ-MM-2 USTs: For earthwork activities occurring within the sidewalk in the vicinity of West 11 Street and South Olive Street, potholing prior to construction is required to assess if any Underground Storage Tanks (USTs) are present and to reduce the potential for construction delays. If a UST is identified, a tank removal permit and oversight of the removal shall be submitted to the Los Angeles Fire Department (1024 Olive EIR MMP at 4.13).

Based on the mitigation measures, the EIR concluded there would be a less than significant impact. The impacts identified above in the analysis and case studies would be similar for the five housing types accommodated by the Housing Element Update. A single-family home, ADU, mixed use, multi-family, or rehabilitation or conversion, if on a contaminated site and involving ground disturbance, could have the potential for an impact to a school within .25 miles. Rehabilitations and conversions would be less likely to result in impacts from soil contamination as they are unlikely to need ground disturbance, but they may require abatement for LCP, ACMs, and/or PCBs involving structures dating older than 1978.

Based on all of the above, the project would result in potential exposure to LCP, ACMs, and/or PCBs, oil wells or methane. As discussed in Threshold 4.7-1, existing regulatory framework is sufficient to reduce potential impacts to a ***less than significant*** level.

In regard to soil contamination, as previously discussed, GeoTracker and EnviroStor identifies the locations of hazardous material sites in the City. As discussed in detail under Impact 4.7-3, below, a process to identify and, as necessary, remediate soil and/or groundwater contamination exists and would normally address such hazards. However, because there is not a specific legal requirement to undertake a preliminary investigation to determine the possible presence of hazardous material contamination in soil and groundwater, it is possible that such contaminants could be overlooked prior to the development of

each of the different project types as described above. These activities or conditions could potentially result in the release of hazardous materials during excavation and grading of individual construction sites. If within one-quarter mile of a school, such releases could have significant health and safety effects on school-aged children. Impacts relating to release of hazardous materials from soil contamination near a school is ***potentially significant***.

Mitigation Measures

4.7-2(a) Environmental Site Assessment

(1) Applicability Threshold. Discretionary projects that require grading, excavation, or building permit from LADBS and which meet the criteria below shall comply with the standard in (2):

- Located on or within 500 feet of a Hazardous Material site listed on the following databases:
  - SWRCB GeoTracker (refer to https://geotracker.waterboards.ca.gov);
  - DTSC EnviroStor (refer to https://www.envirostor.dtsc.ca.gov/public);
  - DTSC Hazardous Waste Tracking System (refer to https://hwts.dtsc.ca.gov);
  - LAFD Certified Unified Program Agency (refer to the active, inactive, and historical inventory lists at https://www.lafd.org/fire-prevention/cupa/public-records);
  - Los Angeles County Fire Department Health Hazardous Materials Division (refer to the active and inactive facilities, site mitigation, and California Accidental Release Prevention inventory lists at https://fire.lacounty.gov/public-records-requests);
  - SCAQMD Facility Information Detail (refer to https://xappprod.aqmd.gov/find); or
- Located on or within 500 feet of a Hazardous Materials site designated as a RCRA Small Quantity Generator or Large Quantity Generator (refer to the USEPA Envirofacts database at https://enviro.epa.gov/index.html); or
- Located on an Oil Drilling District or located on or within 50 feet of a property identified as having an oil well or an oil field (active or inactive) by CalGEM (refer to https://www.conservation.ca.gov/calgem/Pages/WellFinder.aspx); or
- Located on land currently or previously designated with an industrial use class or industrial zoning, on whole or in part; or
- Located on land currently or previously used for a gas station or dry-cleaning facility.

Or:

- The Applicant or Owner are aware or have reason to be aware that the Project site was previously used for an industrial use, gas station, or dry-cleaner.

And:

- The site has not been previously remediated to the satisfaction of the relevant regulatory agency/agencies for any contamination associated with the above uses or conditions.

(2)A Phase I Environmental Site Assessment (ESA) shall be prepared by a Qualified Environmental Professional in accordance with State standards/guidelines and current professional standards, including the American Society for Testing and Materials (ASTM) Standard Practice for Environmental Site Assessments, to evaluate whether the site, or the surrounding area, is contaminated with hazardous substances from any past or current land uses, including contamination related to the storage, transport, generation, or disposal of toxic or Hazardous Waste or materials.

If the Phase I ESA identifies a Recognized Environmental Condition (REC) and/or if recommended in the Phase I ESA, a Phase II ESA shall also be prepared by a Qualified Environmental Professional. The Phase I and/or Phase II ESAs shall be maintained pursuant to the proof of compliance requirements in Section I.D.6 and made available for review and inclusion in the case file by the appropriate regulatory agency, such as the SWRCB, DTSC, or LAFD Hazard Mitigation Program. Any remediation plan recommended in the Phase II ESA or by the appropriate regulatory agency shall be implemented and, if required, a No Further Action letter shall be issued by the appropriate regulatory agency prior to issuance of any permit from LADBS, unless the regulating agency determines that remedial action can be implemented in conjunction with excavation and/or grading. If oversight or approval be a regulatory agency is not required, the Qualified Environmental Professional shall provide written verification of compliance with and completion of the remediation plan, such that the site meets the applicable standards for the proposed use, which shall be maintained pursuant to the proof of compliance requirements in Section I.D.6.

4.7-2(b) Site Remediation and Health and Safety Plan

For discretionary projects that require site remediation under MM-HAZ 4.7-2a, if contaminants of concern (COCs) are detected above regulatory action levels, the project applicant shall retain a qualified environmental consultant to prepare a Soil Management Plan (SMP). If the project is under regulatory oversight, the SMP shall be submitted to appropriate agencies (such as SCAQMD, DTSC or others) for review and approval prior to the commencement of excavation and grading activities. The SMP shall be implemented during excavation and grading activities associated with the project to ensure that contaminated soils are properly identified, excavated, and disposed of off-site, as follows:

- The SMP shall be prepared and executed in accordance with South Coast Air Quality Management District (SCAQMD) Rule 1166, Volatile Organic Compound Emissions from Decontamination of

Soil. The SMP shall require the timely testing and sampling of soils so that contaminated soils can be separated from inert soils for proper disposal. The SMP shall specify the testing parameters and sampling frequency. During excavation, Rule 1166 requires that soils identified as contaminated shall be sprayed with water or another approved vapor suppressant or covered with sheeting during periods of inactivity of greater than an hour, to prevent contaminated soils from becoming airborne. Under Rule 1166, contaminated soils shall be transported from the Project Site by a licensed transporter and disposed of at a licensed storage/treatment facility to prevent contaminated soils from becoming airborne or otherwise released into the environment.

- During the project's excavation phase, the applicant shall remove and properly dispose of impacted materials in accordance with the provisions of the SMP. If soil is stockpiled prior to disposal, it will be managed in accordance with the Project's Storm Water Pollution Prevention Plan, prior to its transfer for treatment and/or disposal. All impacted soils would be properly treated and disposed of in accordance with SCAQMD Rule 1166.
- The project applicant shall commission a site-specific Health and Safety Plan (HASP) to be prepared in compliance with Occupational Safety and Health Administration (OSHA) Safety and Health Standards (29 Code of Federal Regulations 1910.120) and Cal-OSHA requirements (CCR Title 8, General Industry Safety Orders and California Labor Code, Division 5, Part 1, Sections 6300-6719) and submitted for review by the Department of Building and Safety. The HASP shall address, as appropriate, safety requirements that will serve to avoid significant impacts or risks to workers or the public. The HASP shall include emergency contact numbers, maps to the nearest hospital, gas monitoring action levels, gas response actions, allowable worker exposure times, and mandatory personal protective equipment requirements. The HASP shall be signed by all workers involved in the activities associated with the investigation to demonstrate their understanding of the risks of excavation.

If remediation is determined to be necessary, the grading permit shall not be issued until the applicable regulatory agency has indicated that further remedial action is not required.

Significance After Mitigation

As discussed above, mitigation is not necessary for impacts related to LCP, ACM, PCB, oil wells or methane not related to soil contamination as existing regulations would be expected to reduce impacts to less than significant. Although there are extensive regulations to address soil contamination that would foreseeably avoid most impacts from soil contamination there may be a chance that impacts could result from unknown soil contamination. Housing development projects implementing Mitigation Measures 4.7-2a and 4.7-2b could reduce impacts to schools to a less than significant level by implementation of a necessary

remediation of soil and/or groundwater contamination prior to excavation or grading on properties within 0.25 mile of schools. However, it is not feasible as a policy matter to impose the measures on ministerial projects based on the resources needed to adopt and implement the measure. Additionally, even with application of the mitigation measures based on unique circumstances, significant impacts may still occur. Based on this, impacts related to hazardous emissions and handling of hazardous and acutely hazardous materials, substances or waste remain ***significant and unavoidable***.

Threshold 4.7-3	Will housing development accommodated under the Housing Element Update be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?

Impact 4.7-3 Housing development accommodated under the Housing Element Update may occur on properties with soil and groundwater contamination, including those listed as hazardous material sites, as well as those contaminated sites that are not listed. The possible presence of soil, soil vapor, or groundwater contamination on such sites could expose construction workers and residents or visitors on neighboring properties to hazards during construction of individual future developments. Impacts related to sites that are listed as hazardous material sites or that are not listed but contain contamination would create a significant hazard to the public or environment and would be ***significant and unavoidable*** after implementation of mitigation measures.

Notwithstanding the impact question is limited to sites complied on a list pursuant to Government Code Section 65962.5, the analysis herein will also analyze contamination of soils on sites that have not been listed.

Government Code section 65962.5 requires the California Environmental Protection Agency to develop an updated Cortese List. The DTSC is responsible for a portion of the information contained in the Cortese List. Other State and local government agencies are required to provide additional hazardous material release information for the Cortese List (DTSC 2020). The following resources were reviewed to provide hazardous material release information:

- SWRCB GeoTracker database (GeoTracker 2020)
- DTSC EnviroStor database (EnviroStor 2020)
- CalGEM Well Finder
- DTSC's Hazardous Waste Tracking System

- LAFD Certified Unified Program Agency
- Los Angeles County Fire Department Health Hazardous Materials Division
- SCAQMD Facility Information Detail

As previously discussed in the Environmental Setting and in Impact 4.7-2, the City contains numerous sites identified on various regulatory databases as being contaminated from the release of hazardous substances in the soil or groundwater. In comparison to areas that have historically consisted primarily of residential development, many urbanized areas of the City have high potential for contamination due to various historical uses, which may include gas stations, dry cleaners, agricultural uses, and industrial facilities. Contamination includes soil, groundwater, and soil vapor. Thus, construction activity that disturbs soil or groundwater could have the potential to result in the release of hazardous materials, which could adversely affect construction workers and/or neighboring properties. As discussed in the regulatory setting, it is unlawful to disturb or handle contaminated soil without notifying relevant agencies and complying with federal and state laws.

To avoid liability, including strict liability laws that require property owners to be responsible for clean-up of contamination on their property regardless who caused it, it is common for property owners to obtain a Phase I Environmental Site Assessment (ESA) to be conducted prior to buying property and before excavation and construction activity. The purpose of the Phase I ESA is to identify recognized environmental conditions (RECs) associated with soil and groundwater contamination. The scope of work for the Phase I ESA consists of four elements: records review, site reconnaissance, interviews, and report preparation. The Phase I ESA determines whether there are any known contaminated sites are located near the site or if current or historic uses of the site could have resulted in contamination of the soil or groundwater. Based on the results of the Phase I ESA, an additional Phase II subsurface investigation may be warranted to determine whether any identified RECs involve contamination exceeding regulatory action levels. If contamination exceeding action levels is identified, it would need to be remediated with regulatory oversight from an appropriate agency. Depending on the level and type of contamination, the oversight agency could be the City, the County of Los Angeles, the RWQCB, the DTSC, or the USEPA. Remedial actions would typically involve removal and proper disposal, capping, or treatment of contaminated soil, soil vapor, or groundwater.

The process described above would normally identify and, as necessary, remediate soil, soil vapor or groundwater contamination. Remediation of contamination exceeding regulatory action levels would address potential impacts during ground disturbance and improve conditions in the long term. In addition, in the event that a UST is located on a project site, adherence to RCM-HAZ-6 would be required for removal of the UST and remediation prior to issuance of a use of land or building permit; and adherence to RCM-

HAZ-7 would be required if other hazardous or contaminated materials are encountered during construction or geotechnical exploration for an individual project under the Housing Element Update. However, because there is not a specific legal requirement for a Phase I ESA for all excavation or construction, there is the potential for soil or groundwater contamination to go undetected. Thus, future grading and construction would have the potential to result in exposure of construction workers and occupants of neighboring properties to releases of hazardous materials. This would be a potentially significant impact.

If vapor intrusion is identified as a concern onsite and installation of a membrane or other sub-slab vapor barrier is recommended to prevent migration of soil vapor into structures, the project applicant shall adhere to the Soil Gas Assessment and Mitigation prepared by Los Angeles County Department of Public Works Gas Hazard Mitigation Policy and Standards, as described in RCM-HAZ-8, and updated February 3, 2020 (LACPW 2020). This policy is applicable to the requirements stated in Los Angeles County Building Code Sections 110.3, 110.4, and 110.5

Unlike some of the other types of impacts, the impact related to soil contamination and listed sites is not as related to the types of housing units (i.e., multi-family, single family, ADU, mixed use, conversion and rehabilitation) anticipated under the Housing Element Update, so much as the location of the housing units. With that said, larger developments, such as large-scale multi-family developments or mixed use projects, may have the potential to result in more substantial impacts due to their greater scale and larger overall footprint. In particular, those spanning multiple parcels with varying historical uses have the potential to encompass and thus, directly affect, a subsurface with historical impacts. Although the most likely potential impacts vary somewhat by development type, potential impacts would generally include (1) exposure of construction workers to soil, soil vapor, and groundwater contamination; (2) exposure of residents to soil, soil vapor, and groundwater contamination; and (3) exposure of neighboring properties to soil, soil vapor, and groundwater contamination. Of all of the hazard impacts identified in the environmental case studies for housing projects reviewed for this EIR (see Table 4-2), this impact was one of the most common impacts. Twelve of the projects included mitigation for some kind of soil testing and/or remediation. All of the environmental assessments concluded less than significant with mitigation. The following is a sample of the projects to demonstrate the variation on types of soil contamination and mitigation measures.

- **See 1045 Olive** project discussed above.
- **6901 Santa Monica** project in Hollywood involved the demolition and removal of offices and automobile storage building to build seven story, 231 unit building with 15,000 ground floor commercial. The EIR found that there was evidence of hydraulic lifts onsite associated with a former auto repair use on site. Removal of the hydraulic lift involved removing the concrete around the lift and excavating remaining hydraulic oil from the lift and cylinder, backfilling the site with certified

clean fill, and transporting the waste hydraulic oil and scrap lift to a recycling facility. All hydraulic fluids were to be properly disposed of consistent with city, state and federal regulations. The EIR concluded impacts related to the hydraulic lifts would be less than significant (6901 Santa Monica Boulevard DEIR at 4.F-24). The EIR also found that based on historical uses there were soils contaminated with petroleum hydrocarbons and the potential for USTs. Specifically, the EIR found that of the 78,000 cubic yards to be excavated at the site, approximately 15,000 cubic yards were contaminated. With the following mitigation measures, the project impacts were found to be less than significant:

F-1 Prior to excavation, the Project Applicant shall prepare a survey of the Project Site using ground-penetrating radar or equivalent means to locate any unknown/unrecorded USTs, clarifiers, drains or other potentially contaminated equipment that may be present. If any USTs are discovered during the pre-excavation survey, they shall be properly registered and permanently abandoned by removal in accordance with LAFD requirements.

F-2 Prior to excavation, a technician shall perform boring tests of (1) soil near any USTs, clarifiers, drains or other potentially contaminated equipment discovered by pre- excavation survey; and (2) soil in portions of the Project Site where historical conditions indicate potential contamination, including the locations identified by the Phase II ESA. If soils impacted with hazardous chemicals and/or petroleum products are encountered or discovered by pre-excavation survey, a licensed Professional Geologist or Professional Engineer shall oversee proper characterization and remediation of identified impacted materials.

F-3 A Construction Soil Management Plan shall be required to guide the excavation of the below-grade portions of the Project Site. The Plan shall address the Site's known historic conditions related to subsurface petroleum at the Project Site in addition to any potential sources of contamination discovered during the pre-excavation survey, and present the appropriate methods and protocol for management of encountered conditions.

F-4 A technician shall be present on the Project Site during the demolition, excavation, and grading phases to sample and screen any residual contaminants, should they be encountered. The technician shall use visual identification (such as discolored soils) and/or a screening meter to identify any residual contaminants, should they be encountered. Testing to characterize the material shall occur either on-site in a mobile laboratory or off-site in a remote laboratory. Materials shall be identified, segregated, and tracked as to their extent on the Project Site.

F-5 A system to prevent the entry of vapors into the building, (i.e. vapor barrier and venting system) shall be incorporated into the design and construction of Project building slabs to ensure adequate mitigation of

the vapor intrusion exposure pathway and continuous protection of human health after the Project is constructed.

- **340 S. Hill Street** -Equity Residential Mixed-Use Project involved the demolition of an 850 square foot restaurant and 109 space surface parking lot for the development of a 31-story mixed use development for 428 multi-family residential units, and involving the export of 48,000 cubic yards of soil in Downtown. In that project, the site was not listed on any of the site compiled pursuant to Government Code Section 65962.5 (Equity Residential SCEA at V-123.) The site had historical uses for a restaurant and drycleaners. Soil borings were taken and the site showed evidence of lead in the soil, which was only found to 5 feet and determined to be consistent with contaminated fill in the area of LA which has greater than 100 years of development. The environmental analysis concluded that with the following mitigation, impacts would be less than significant:

  MM-HAZ-1: Prior to issuance of a grading permit, the Project Applicant shall prepare a Soil Management Plan (SMP) for the Project. The SMP shall be approved by the Los Angeles Fire Department and the Department of Public Works. The SMP shall address the delineation of the vertical and lateral extent of identified TPH and metals impacts in Project Site soil. Soil management procedures shall be described so that hazardous soil can be separated from non-hazardous soil during excavation tasks. Also, contingency procedures shall be presented in the event that unanticipated hazardous materials issues such as USTs are identified during excavation. The SMP shall describe the transport and disposal of the soil at an appropriate waste management facility(ies). Soil management procedures outlined in the SMP shall be followed during the Project's excavation and development phases to properly manage the various classes of soil and to minimize risk to workers and the public during construction. Prior to issuance of a building permit, the Department of Building and Safety shall confirm that all contaminated soil has been removed from the Project Site.

- **The Soul Project** in the Wilshire Community Plan area involved a 223,000 square foot mixed-use tower with 256 residential units and 2,500 square feet of office, the demolition of existing buildings except the reuse of a church building into a restaurant, and four levels of subterranean parking. The environmental assessment found that while the project site was not currently listed, adjacent sites were, which included an adjacent sites included a previous service station, previous dry cleaner, historical auto use, and another large quantity generator of potential hazardous waste. A subsurface investigation report found hydrocarbons and VOC. Groundwater tests showed benzene and toluene, gasoline constituents. Indoor air samples showed low likelihood of health risk to future occupants (Note: SCEA has exception requiring consideration of impacts from environment to project). Notwithstanding that finding, MM was imposed to minimize any risk from concrete cuts and utility

penetrations to the foundation/slab of the church building. (Soul Project SCEA at 5-133). The mitigation was as follows:

MM HAZ-1: A Site Specific Soil Mitigation Plan (SMP) will be prepared that will provide guidance to contractors for appropriate handling, screening, and management of potentially impacted or impacted soils that may be encountered at the Project Site during grading and excavation activities. These procedures will include training for construction personnel on the appropriate procedures for identification of suspected impacted soils; requirements for testing and collection of potentially contaminated soils; segregation of potentially impacted soils; and applicable soil handling and disposal procedures.

The SMP will also include procedures for handling and transportation of soils with respect to nearby sensitive receptors, such as nearby residential uses and schools. In accordance with SCAQMD Rule 1166 requirements, impacted soil removed from the Project Site must comply with the following:

- *Be transported to an approved treatment/disposal facility.*
- *When loading into trucks is completed, and during transportation, no excavated material will extend above the sides or rear of the truck or trailer.*
- *Prior to covering/tarping, loaded impacted soil must be wetted by spraying with dust inhibitors.*
- *The trucks or trailers must be completely covered/tarped prior to leaving the Project Site to prevent particulate emissions to the atmosphere.*
- *The exterior of the trucks (including the tires) must be cleaned off prior to the trucks leaving the excavation location and leaving the disposal site before returning to the Project Site.*

MM HAZ-2: A Groundwater Management Plan (GWMP) will be prepared that includes training and protocol procedures to contractors for avoiding contact with groundwater during excavation and construction of the Project and appropriate disposal protocols of contaminated groundwater. The GWMP will include a requirement for development and implementation of a safety plan to be prepared prior to commencement of construction consistent with Occupational Safety and Health Administration (OSHA) Safety and Health Standards 29 CFR 1910.120 as well as management of groundwater produced through temporary dewatering activities. The safety plan will include necessary training, operating and emergency response procedures, and reporting requirements to regulate all activities that bring workers in contact with potentially contaminated groundwater. In the unlikely event that groundwater contamination occurs, the GWMP will include remedial efforts that may include batch extraction of groundwater using an on-site dewatering system or application of a chemical amendment, such as oxygen or hydrogen source depending on the type of contamination impact.

MM HAZ-3: All concrete cuts and utility penetrations into the building pad(s) or concrete slab(s) that underlie the former church building that may occur during the remodeling/repurposing of the existing school building will be sealed to add an additional measure of protection against potential vapor intrusion.

- **The Thatcher Yard** project in the Venice Community Plan area, involved the construction of 101,000 square foot, 98 unit supportive housing project for seniors and the formerly homeless and a subterranean parking level. The project site was listed as a LUST site as three LUSTs had been on site but removed. Additionally, soil vapor samples detected petroleum hydrocarbons on site, vinyl chloride, TCE, benzene, and methane gas. Soil samples found fuel hydrocarbons and heavy oil carbons, acetone, lead and zinc. Groundwater sampling found TPH gas, TCE, chloride, arsenic, and other metals but all below drinking water standards. Methane was attributed to dirty fill on site and an abandoned oil core on site. With the following mitigation measures, impacts were found to be less than significant:

  MM HAZ-1: The artificial fill prism present on the southeastern portion of the property (3311 Thatcher Avenue) shall be removed as required by the geotechnical engineer for foundation support and as required to mitigate the presence of lead in the fill prior to construction of the proposed buildings. After removal of the approximately 10 feet of fill deposit, a vent cone and membrane system shall be installed and approved by LADBS over the onsite abandoned oil core hole.

  MM HAZ-2: A site remediation plan shall be developed to address potentially elevated concentrations of lead within the fill deposit at the Project Site. The plan shall address removal of the potentially impacted soil, characterization of the potentially impacted soil, and identification of appropriate disposal. The remediation plan shall also address removal of the on-site groundwater monitoring wells on the Project Site. This remediation plan shall be reviewed and approved by the RWQCB prior to implementation. (Thatcher Yard SCEA at V-69-70; 71.)

The impacts identified above in the analysis and case studies would be similar for any type of development project whether a single family home, ADU, mixed use, multi family or rehabilitation or conversion if located on a contaminated site.

Based on all of the above, impacts from housing development as a result of the Housing Element Update related to soil contamination on a listed or unlisted site would be ***potentially significant***.

Mitigation Measures

Mitigation Measures 4.7-2(a) and 4.7-2(b) listed under Impact 4.7-2 would address potential impacts to the public or environment.

Significance After Mitigation

Although there are extensive regulations to address soil contamination that would foreseeably avoid most impacts from soil contamination there may be a chance that impacts could result from unknown soil contamination. Implementation of Mitigation Measures 4.7-2(a) and 4.7-2(b) could reduce impacts to the public or environment to a less than significant level by ensuring the identification and, as necessary, remediation of soil and/or groundwater contamination prior to excavation or grading. However, it is not feasible as a policy matter to impose the measures on ministerial projects based on the resources needed to adopt and implement the measure. Additionally, even with application of the mitigation measures based on unique circumstances, significant impacts may still occur. Based on this, impacts related to hazardous emissions and handling of hazardous and acutely hazardous materials, substances or waste remain ***significant and unavoidable***.

Cumulative Impacts

The geographic extent of cumulative analysis for the Housing Element Update is the entire City of Los Angeles, consistent with the impact analysis provided above. Cumulative impacts may occur if impacts of the proposed project combine with similar impacts of other projects in the cumulative scenario. In this case, the Proposed Project is the Housing Element Update, inclusive of build out of the RHNA. Therefore, the cumulative scenario is not comprised of other Housing Element Update projects (which collectively constitute the Proposed Project), but rather of projects unrelated to the Housing Element Update that could result in similar impacts related to hazards and hazardous materials as projects under the Housing Element Update, such as nonresidential development or residential developments previously approved or in the pipeline. As such, cumulative impacts related to hazards and hazardous materials could occur if impacts associated with housing development projects accommodated by the Housing Element Update combine with similar impacts related to hazards and hazardous materials of other development projects throughout the geographic extent of analysis, which is defined as the City of Los Angeles. The cumulative impact analyses for the various resources are limited to the identification of the types of impacts that may occur as described below.

Upset/Accident Involving Hazardous Materials

Impacts related to upsets and accidents involving hazardous materials are also generally site-specific and an accident at one location generally does not increase hazards at another location. Cumulative development could occur on properties listed on hazardous materials sites or involve the demolition of existing structures, which may contain hazardous materials such as LBP and ACMs. Various regulations and guidelines pertaining to abatement of, and protection from, exposure to asbestos and lead have been

adopted for demolition activities and would apply to all new development in the City and County. All demolition that could result in the release of lead and/or asbestos must be conducted according to Cal/OSHA standards. In addition, as discussed under Impact 4.7-1, housing development accommodated by the Housing Element Update that would be expected to increase the potential for accidents involving hazardous materials and businesses that transport or use hazardous materials throughout the City, would be subject to the applicable RCMs, as wells as federal, State, and local regulations. Therefore, although Citywide growth could increase the overall potential for accidents involving hazardous materials, impacts related to hazardous material accidents generally are not cumulative in nature. For these reasons, the incremental effect of the Housing Element Update related to accidents involving hazardous materials would not be cumulatively considerable and cumulative impacts would be ***less than significant***.

Hazardous Materials Near Schools

As discussed above, impacts related to hazards and hazardous materials are generally site-specific and exposure to a hazard at one location generally does not increase hazards at another location. Therefore, although Citywide growth could potentially increase the overall potential for hazardous material emissions or releases to affect schools, such impacts generally are not cumulative in nature. In addition, as discussed under Impact 4.7-2, the Housing Element Update would not accommodate new development that would increase the use, storage, or transport of large quantities of hazardous materials near schools and businesses that transport, use, or dispose of hazardous materials throughout the City, and would be subject to federal, State, and local regulations. However, the project could result in significant unavoidable impacts related to contaminated soils. Therefore, the incremental effect of the Housing Element Update with respect to contaminated soils near schools would potentially be cumulatively considerable and cumulative impacts would be ***significant and unavoidable***.

Hazardous Material Sites

As discussed above, impacts related to the accidental release of soil or groundwater contaminants are site-specific and exposure to a hazard at one location generally does not increase hazards at another location. Therefore, although Citywide growth could potentially increase the overall potential for releases of hazardous materials from contaminated sites, such impacts generally are not cumulative in nature. As discussed under Impact 4.7-3, the Housing Element Update could involve disturbance of contaminated sites and thus result in the release of hazardous materials; however, such impacts would be localized in nature. Mitigation included under Impact 4.7-2 may reduce impacts related to disturbance of contaminated sites to a less than significant level but significant impacts may still occur. Therefore, the incremental effect of the Housing Element Update related to the release of hazardous material from such sites would be cumulatively considerable and cumulative impacts would be ***significant and unavoidable***.

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4.8 HYDROLOGY AND WATER QUALITY

This section analyzes the project's potential impacts on hydrology pertaining to drainage and flood flows. The Initial Study found less than significant impacts to surface water quality, groundwater levels, and groundwater quality. This section provides further analysis to flood hazards, dam inundation, and the potential for the alteration of natural drainages and flood flows as a result of the Housing Element and Safety Element Update. This analysis is based in part on the City's various flood hazard plans, the City's Zoning Ordinance, and additional State and local regulations that implement design standards and mitigation to help reduce overall impacts to drainages and flood flows.

4.8.1 ENVIRONMENTAL SETTING

Topography

The City of Los Angeles consists of flat basins defined by the San Gabriel, Santa Susana, and Santa Monica Mountains, three major rivers, and the Pacific Ocean. Elevation ranges from 5,074 feet at Mount Lukens (Sister Elsie Peak) in the San Gabriel Mountains to seal level at the coastline (City of Los Angeles 2017).

Flood Hazards

The major causes of flooding in Los Angeles are short-duration, high-intensity storms. Water courses in the City can flood in response to a succession of intense winter rainstorms, usually between early November and late March. A series of such weather events can cause severe flooding in the City due to the large percentage of impervious area and the age and capacity of the drainage system. Other types of floods that may occur include flash floods, flooding from dam and levee failure, flooding from tsunamis, and power-failure-induced flooding. In the City, large floods occur approximately every 5 to 6 years (City of Los Angeles 2017).

Flooding can cause widespread damage to affected areas. Buildings and vehicles can be damaged or destroyed, while smaller objects can be buried in flood-deposited sediments. Floods can also cause drowning or isolation of people or animals. In addition, floodwaters can break utility lines, interrupting services and potentially affecting health and safety, particularly in the case of broken sewer or gas lines.

The secondary effects of flooding are due to standing water, which can result in crop damage, septic tank failure, and water well contamination. Standing water can also damage roads, foundations, and electrical circuits. Inadequately sized culverts and bridges can create impediments to the passage of highwater flow in streams and gullies. Undersized infrastructure typically results in short-term back-ups behind the culvert or bridge, with pooling water in such areas, in effect, an unintended detention basin.

FEMA designated 100-year flood zones and 500-year flood zones are located throughout the City. According to the Safety Element of the General Plan, flood hazard areas subject to 100-year floods comprise 30 square miles within the City. Areas near Chatsworth Reservoir in the northwest portion of the City and Hansen Dam and Tujunga Wash in the northeast portion of the City, the Port of Los Angeles in the southern portion of the City, and portions of central Los Angeles fall within 100-year floodplain areas (City of Los Angeles 1996). As of 2017, a total of 5,628 structures, 88 percent of them residential and 10 percent commercial or industrial, are located in the 100-year flood zone (City of Los Angeles 2017).

Portions of central Los Angeles, the area east of Kenneth Hahn State Recreation Area, Venice, and most of southeast Los Angeles fall within 500-year flood zones (City of Los Angeles 1996). A total of 38,927 structures, 89 percent residential and 9 percent commercial or industrial, are located in the 500-year flood zone (City of Los Angeles 2017). Figure 4.8-1 below shows the 100-year and 500-year floodplains located in the City's planning area.

The Safety Element Update will integrate Goals, Objectives and implementation programs from the newly adopted 2020 LA City Floodplain Management Plan. The formal integration of these programs will provide additional help to improve planning to prevent flooding in LA City.

Dam Inundation

Dam failure events are infrequent and usually coincide with events that cause them, such as earthquakes, landslides, and excessive rainfall and snowmelt, but may also occur from water storage facility failure. The City of Los Angeles has 12 dams located within City boundaries, including Eagle Rock, Elysian, Encino, Hansen Recreation Lake, Lopez, Los Angeles Reservoir, Lower Franklin #2, Mulholland, Riviera Reservoir, Santa Ynez Canyon, Silver Lake, and Stone Canyon. However, dams outside of the City boundaries may have potential to cause inundation within the City. These dams include 10th and Western, Big Tujunga, Devils Gate, Diederich Reservoir, Glen Oaks 968, Green Verdugo, Greystone, Laguna Basin, Pacoima, Palos Verdes Reservoir, Sepulveda, and Upper Franklin. Over one third of the land area and population in the City is potentially threatened by dam failure (City of Los Angeles 2017). Figure 4.8-2 below illustrates where the City's dam inundation zones are located.

Figure 4.8-1 City of Los Angeles 100-year and 500-year Floodplains

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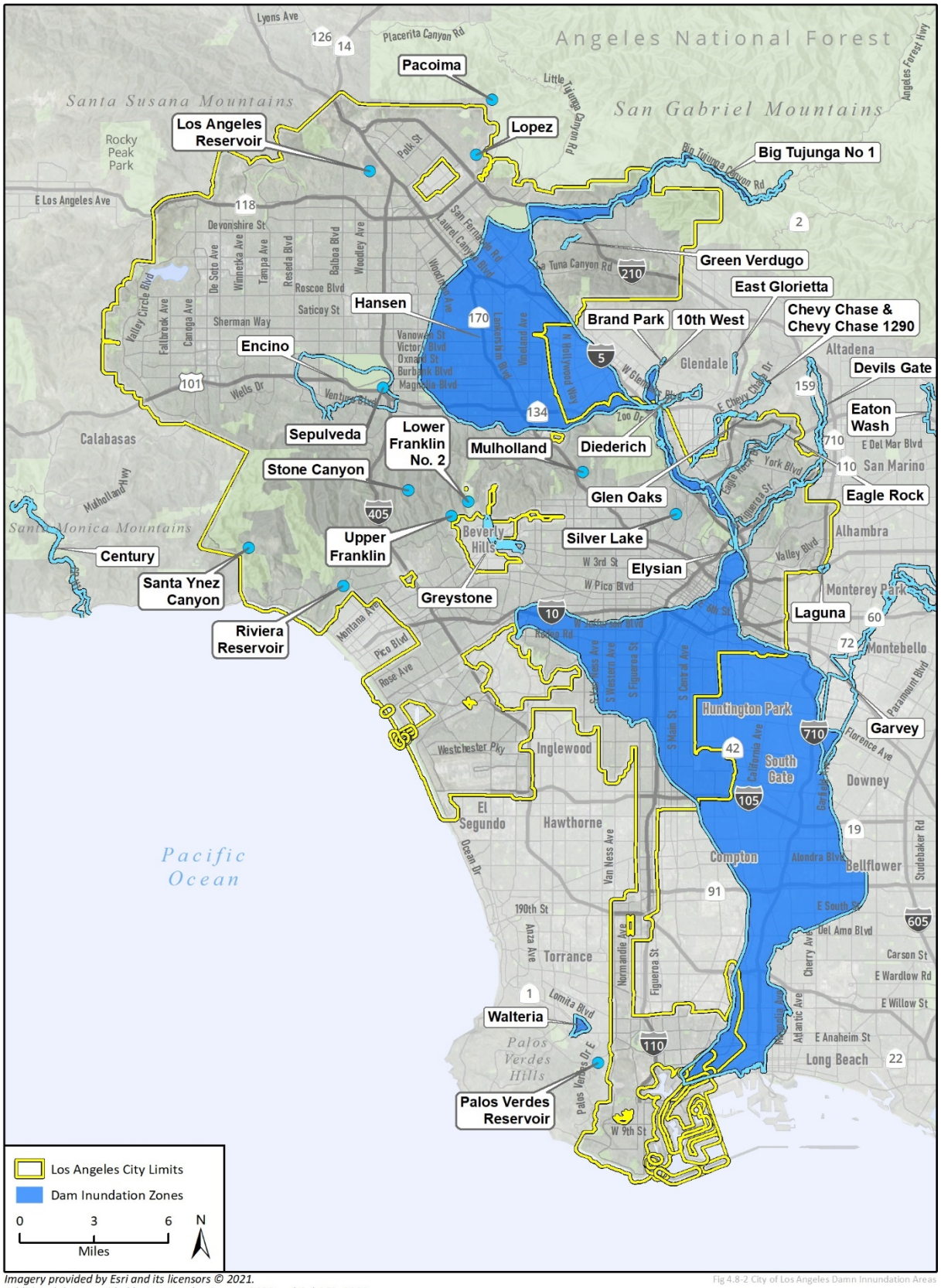
Additional data provided by Los Angeles County, 2020 and FEMA, 2020.

Fig 1 Floodplains

Figure 4.8-2 City of Los Angeles Dam Inundation Zones



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Additional data provided by Los Angeles County, 2020 and Cal OES, 2020.

Fig 4.8-2 City of Los Angeles Damn Innundation Areas

4.8.2 REGULATORY FRAMEWORK

Federal

Clean Water Act

The Clean Water Act (CWA), formerly known as the Federal Water Pollution Control Act, was first introduced in 1948, with major amendments in the 1960s, 1970s and 1980s. The CWA authorizes federal, State, and local entities to cooperatively create comprehensive programs for eliminating or reducing the pollution of state waters and tributaries. Amendments to the CWA in 1972 established the National Pollutant Discharge Elimination System (NPDES) permit program, which prohibits discharge of pollutants into the nation's waters without procurement of a NPDES permit from the United States Environmental Protection Agency (USEPA). The purpose of the permit is to translate general requirements of the Clean Water Act into specific provisions tailored to the operations of each organization that is discharging pollutants. Although federally mandated, the NPDES permit program is generally administered at the State and Regional levels.

The USEPA NPDES Program requires NPDES permits for: (1) Municipal Separate Storm Sewer Systems (MS4) Permits generally serving, or located in, incorporated cities with 100,000 or more people (referred to as municipal permits); (2) 11 specific categories of industrial activity (including landfills); and (3) construction activity that disturbs five acres or more of land. As of March 2003, Phase II of the NPDES Program extended the requirements for NPDES permits to numerous small municipal separate storm sewer systems, construction sites of one to five acres, and industrial facilities owned or operated by small municipal separate storm sewer systems, which were previously exempted from permitting.

National Flood Insurance Program

The National Flood Insurance Act of 1968 and the Flood Disaster Protection Act of 1973 mandate the Federal Emergency Management Agency (FEMA) to evaluate flood hazards (FEMA 1968). FEMA provides flood insurance rate maps (FIRMs) for local and regional planners to promote sound land use and development practices, by identifying potential flood areas based on the current conditions. To delineate a FIRM, FEMA conducts engineering studies referred to as flood insurance studies (FIS). Using information gathered in these studies, FEMA engineers and cartographers delineate special flood hazard areas (SFHA) on FIRMs.

The Flood Disaster Protection Act requires owners of all structures within identified SFHAs to purchase and maintain flood insurance as a condition of receiving federal or federally-related financial assistance, such as mortgage loans from federally-insured lending institutions. Community members within designated areas are able to participate in the National Flood Insurance Program (NFIP) afforded by FEMA.

State

Porter-Cologne Water Quality Act (California Water Code)

The Porter-Cologne Water Quality Control Act established the legal and regulatory framework for California's water quality control (SWRCB 2018). The California Water Code (CWC) authorizes the State Water Resources Control Board (SWRCB) to implement the provisions of the CWA, including the authority to regulate waste disposal and require cleanup of discharges of hazardous materials and other pollutants. In California, the NPDES stormwater permitting program is administered by the SWRCB.

Under the CWC, the State of California is divided into nine Regional Water Quality Control Boards (RWQCBs), which govern the implementation and enforcement of the CWC and the CWA. The City of Los Angeles is located in Region 4, also known as the Los Angeles Region (LARWQCB). The RWQCBs develop and enforce water quality objectives and implement plans that will best protect California's waters, acknowledging areas of different climate, topography, geology, and hydrology. Each RWQCB is required to formulate and adopt a Water Quality Control Plan or Basin Plan for its region. The Basin Plan establishes beneficial use definitions for the various types of water bodies, and serves as the basis for establishing water quality objectives, discharge conditions and prohibitions, and must adhere to the policies set forth in the CWC and established by the SWRCB. In this regard, the LARWQCB issued the Los Angeles Basin Plan on August 29, 2014 for the Coastal Watersheds of Los Angeles and Ventura Counties, with subsequent amendments. The RWQCB is also given authority to issue waste discharge requirements, enforce actions against stormwater discharge violators, and monitor water quality (EPA 2016).

Regional

County of Los Angeles Hydrology Manual

Drainage and flood control in the City of Los Angeles (City) are subject to review and approval by the Department of Public Works, Bureau of Engineering (Bureau of Engineering). Storm drains within the City are constructed by both the City and the Los Angeles County Flood Control District (County Flood Control). The County Flood Control constructs and has jurisdiction over regional facilities such as major storm drains and open flood control channels, while the City constructs and is responsible for local interconnecting tributary drains.

Per the City's Special Order No. 007-1299, December 3, 1999, the City has adopted the Los Angeles County Department of Public Works' Hydrology Manual as its basis of design for storm drainage facilities (City of Los Angeles 2006). The Department of Public Works' Hydrology Manual requires that a storm drain conveyance system be designed for a 25-year storm event and that the combined capacity of a storm drain and street flow system accommodate flow from a 50-year storm event. Areas with sump conditions are

required to have a storm drain conveyance system capable of conveying flow from a 50-year storm event. The County also limits the allowable discharge into existing storm drain (MS4) facilities based on the County's MS4 Permit, which is enforced on all new developments that discharge directly into the County's MS4 system.

Drainage and flood control structures and improvements within the City are subject to review and approval by the City's Department of Public Works and Department of Building and Safety. As required by the Department of Public Works, all public storm facilities must be designed in conformity with the standards set forth by Los Angeles County. The Department of Public Works reviews and approves MS4 plans prior to construction. Any proposed increases in discharge directly into County facilities, or proposed improvements of County-owned MS4 facilities, such as catch basins and drainage lines, require approval from County Flood Control to ensure compliance with the County's Municipal NPDES Permit requirements.

NPDES Permit Program

As indicated above, in California, the NPDES stormwater permitting program is administered by the SWRCB through its nine RWQCBs. This NPDES permit, referred to as General Permit for Stormwater Discharges from Construction Activities by the SWRCB, establishes a risk-based approach to stormwater control requirements for construction projects.

Construction: Stormwater Pollution Prevention Plan

For all construction activities disturbing one acre of land or more, California mandates the development and implementation of Stormwater Pollution Prevention Plans (SWPPP). The SWPPP documents the selection and implementation of best management practices (BMPs) to prevent discharges of water pollutants to surface or groundwater. The SWPPP also charges owners with stormwater quality management responsibilities. The developer or contractor for a construction site subject to the General Permit must prepare and implement a SWPPP that meets the requirements of the General Permit (SWRCB 2019). The purpose of an SWPPP is to identify potential sources and types of pollutants associated with construction activity and list BMPs that would prohibit pollutants from being discharged from the construction site into the public stormwater system. BMPs typically address stabilization of construction areas, minimization of erosion during construction, sediment control, control of pollutants from construction materials, and post-construction stormwater management (e.g., the minimization of impervious surfaces or treatment of stormwater runoff). The SWPPP is also required to include a discussion of the proposed program to inspect and maintain all BMPs.

A site-specific SWPPP could include, but not be limited to the following BMPs:

- Erosion Control BMPs – to protect the soil surface and prevent soil particles from detaching. Selection of the appropriate erosion control BMPs would be based on minimizing areas of disturbance, stabilizing disturbed areas, and protecting slopes/channels. Such BMPs may include, but would not be limited to, use of geotextiles and mats, earth dikes, drainage swales, and slope drains.
- Sediment Control BMPs – are treatment controls that trap soil particles that have been detached by water or wind. Selection of the appropriate sediment control BMPs would be based on keeping sediments on-site and controlling the site boundaries. Such BMPs may include, but would not be limited, to use of silt fences, sediment traps, and sandbag barriers, street sweeping and vacuuming, and storm drain inlet protection.
- Wind Erosion Control BMPs – consist of applying water to prevent or minimize dust nuisance.
- Tracking Control BMPs – consist of preventing or reducing the tracking of sediment off-site by vehicles leaving the construction area. These BMPs include street sweeping and vacuuming. Project sites are required to maintain a stabilized construction entrance to prevent off-site tracking of sediment and debris.
- Non-Stormwater Management BMPs – also referred to as "good housekeeping practices," involve keeping a clean, orderly construction site.
- Waste Management and Materials Pollution Control BMPs – consist of implementing procedural and structural BMPs for handling, storing, and disposing of wastes generated by a construction project to prevent the release of waste materials into stormwater runoff or discharges through the proper management of construction waste.

The SWRCB adopted a General Permit for Stormwater Discharges from Construction Activities on September 2, 2009 and most recently amended the permit on July 17, 2012 (Order No. 2012-0006-DWQ, General NPDES Permit No. CAS000002). The Construction General Permit regulates construction activity, including clearing, grading, and excavation of areas one acre or more in size, and prohibits the discharge of materials other than stormwater, authorized non-stormwater discharges, and all discharges that contain a hazardous substance, unless a separate NPDES permit has been issued for those discharges.

To obtain coverage under the Construction General Permit, a developer is required to file a Notice of Intent (NOI) with the appropriate RWQCB and provide proof of the NOI prior to applying for a grading or building permit from the local jurisdiction, and must prepare a State SWPPP that incorporates the minimum BMPs required under the permit as well as appropriate project-specific BMPs. The SWPPP must be completed and certified by the developer and BMPs must be implemented prior to the commencement of construction and may require modification during the course of construction as conditions warrant. When project construction is complete, the developer is required to file a Notice of Termination with the

RWQCB certifying that all the conditions of the Construction General permit, including conditions necessary for termination, have been met.

NPDES Permit for Discharges of Groundwater from Construction and Project Dewatering

Dewatering operations are practices that discharge non-stormwater, such as ground water, that must be removed from a work location to proceed with construction into the drainage system. Discharges from dewatering operations can contain high levels of fine sediments, which if not properly treated, could lead to exceedance of the NPDES requirements. A NPDES Permit for dewatering discharges was adopted by the LARWQCB on September 13, 2018 (Order No. R4-2018-0125, General NPDES Permit No. CAG994004. Similar to the Construction General Permit, to be authorized to discharge under this Permit; the developer must submit a NOI to discharge groundwater generated from dewatering operations during construction in accordance with the requirements of this Permit and shall continue in full force until it expires November 13, 2023 (LARWQCB 2018). In accordance with the NOI, among other requirements and actions, the discharger must demonstrate that the discharges shall not cause or contribute to a violation of any applicable water quality objective/criteria for the receiving waters, perform reasonable potential analysis using a representative sample of groundwater or wastewater to be discharged. The discharger must obtain and analyze (using appropriate methods) a representative sample of the groundwater to be treated and discharged under the Order. The analytical method used shall be capable of achieving a detection limit at or below the minimum level. The discharger must also provide a feasibility study on conservation, reuse, and/or alternative disposal methods of the wastewater and provide a flow diagram of the influent to the discharge point (LARWCB 2013).

Operation: Los Angeles County Municipal Stormwater NPDES Program

The County of Los Angeles and the City are two of the Co-Permittees under the Los Angeles County MS4 Permit (Order No. R4-2012-0175, NPDES Permit No. CAS004001). The Los Angeles County MS4 Permit has been determined by the State Water Resources Control Board to be consistent with the requirements of the Clean Water Act and the Porter-Cologne Act for discharges through the public storm drains in Los Angeles County to statutorily-defined waters of the United States (33 United States Code [USC] §1342(p); 33 CFR Part 328.11). On September 8, 2016, the LARWQCB amended the Los Angeles County MS4 Permit to incorporate modifications consistent with the revised Ballona Creek Watershed Trash Total Maximum Daily Load (TMDL) and the revised Los Angeles River Watershed Trash TMDL, among other TMDLs incorporated into the Los Angeles County MS4 Permit and the Basin Plan for the Coastal Waters of Los Angeles and Ventura Counties.

Under the amended Los Angeles County MS4 Permit, the County and City are both required to implement development planning guidance and control measures that control and mitigate stormwater quality and

runoff volume impacts to receiving waters as a result of new development and redevelopment. The County and the City also are required to implement other municipal source detection and elimination programs, as well as maintenance measures.

Under the Los Angeles County MS4 Permit, permittees are required to implement a development planning program to address stormwater pollution. This program requires project applicants for certain types of projects to implement a Low Impact Development (LID) Plan, except where the Standard Urban Stormwater Mitigation Plan (SUSMP) is proven applicable. The purpose of the LID Plan is to reduce the discharge of pollutants in stormwater by outlining BMPs, which must be incorporated into the design of new development and redevelopment. These treatment control BMPs must be sufficiently designed and constructed to treat or retain the greater of an 85th percentile rain event or first 0.75 inch of stormwater runoff from a storm event.

The Los Angeles County MS4 Permit (Part VI.D.7.c, New Development/Redevelopment Project Performance Criteria) includes design requirements for new development and substantial redevelopment. These requirements apply to all projects that create or replace more than 5,000 square feet of impervious cover. Where redevelopment results in an alteration to more than 50 percent of impervious surfaces of a previously existing development and the existing development was not subject to post-construction stormwater quality control requirements, the entire project would be subject to post-construction stormwater quality control measures.

This Enhanced Watershed Management Program for the Upper Los Angeles River (ULAR EWMP) describes a customized compliance pathway that participating agencies will follow to address the pollutant reduction requirements of the Los Angeles County MS4 Permit (ULARWMG 2016). By electing the optional compliance pathway in the MS4 Permit, the Upper Los Angeles River Watershed Management Group (EWMP Group) has leveraged this EWMP to facilitate a robust, comprehensive approach to stormwater planning for the Upper Los Angeles River watershed. The objective of the EWMP Plan is to determine the network of control measures (BMPs) that will achieve required pollutant reductions while also providing multiple benefits to the community and leveraging sustainable green infrastructure practices. The Permit requires the identification of Watershed Control Measures, which are strategies and BMPs that will be implemented through the EWMP, individually or collectively, at watershed-scale to address the Water Quality Priorities. The EWMP Implementation Strategy is used as a recipe for compliance for each jurisdiction to address Water Quality Priorities and comply with the provisions of the MS4 Permit. The EWMP Implementation Strategy includes individual recipes for each of the 18 jurisdictions and each watershed/assessment area – Los Angeles River above Sepulveda Basin, Los Angeles River below Sepulveda Basin, Compton Creek, Rio Hondo, Verdugo Wash, Arroyo Seco, Burbank Western Channel, Tujunga Wash, Bull Creek, Aliso Wash, Bell Creek, McCoy-Dry Canyon, and Browns Canyon Wash.

Implementation of the EWMP Implementation Strategy will provide a BMP-based compliance pathway for each jurisdiction under the MS4 Permit. The Permit specifies that an adaptive management process will be revisited every two years to evaluate the EWMP and update the program. The EWMP strategy will evolve based on monitoring results by identifying updates to the EWMP Implementation Plan to increase its effectiveness.

The Los Angeles County MS4 Permit contains provisions for implementation and enforcement of the Stormwater Quality Management Program. The objective of the Stormwater Quality Management Program is to reduce pollutants in urban stormwater discharges to the "maximum extent practicable," to attain water quality objectives and protect the beneficial uses of receiving waters in Los Angeles County. Special provisions are provided in the Los Angeles County MS4 Permit to facilitate implementation of the Stormwater Quality Management Program. In addition, the Los Angeles County MS4 Permit requires that permittees implement a LID Plan, as discussed above, that designates BMPs that must be used in specified categories of development projects to infiltrate water, filter, or treat stormwater runoff; control peak flow discharge; and reduce the post-project discharge of pollutants into stormwater conveyance systems. In response to the Los Angeles County MS4 Permit requirements, the City adopted Ordinance No. 173,494 (LID Ordinance), as authorized by Los Angeles Municipal Code (LAMC) Section 64.72.

The City supports the requirements of the Los Angeles County MS4 Permit through the City of Los Angeles' Development Best Management Practices Handbook, Low Impact Development Manual, Part B: Planning Activities (5th edition, May 2016) (LID Handbook), which provides guidance to developers to ensure the post-construction operation of newly developed and redeveloped facilities comply with the Developing Planning Program regulations of the City's Stormwater Program. The LID Handbook assists developers with the selection, design, and incorporation of stormwater source control and treatment control BMPs into project design plans, and provides an overview of the City's plan review and permitting process.

The City implements the requirement to incorporate stormwater BMPs, including LID BMPs, through the City's plan review and approval process. During the review process, project plans are reviewed for compliance with the City's General Plan, zoning ordinances, and other applicable local ordinances and codes, including stormwater requirements. Plans and specifications are reviewed to ensure that the appropriate BMPs are incorporated to address stormwater pollution prevention goals.

Local

Los Angeles Municipal Code Section 62.105, Construction "Class B" Permit

Proposed drainage improvements within the street rights-of-way or any other property owned by, to be owned by, or under the control of the City, require the approval of a B-permit (LAMC Section 62.105). Under the B-permit process, storm drain installation plans are subject to review and approval by the Bureau of Engineering. Additionally, connections to the MS4 system from a property line to a catch basin or a storm drainpipe require a storm drain permit from the Bureau of Engineering.

Los Angeles Municipal Code Sections 12.40 through 12.43, Landscape Ordinance

In 1996, Ordinance No. 170,978 amended LAMC Sections 12.40 through 12.43 to establish consistent landscape requirements for new projects within the City. LAMC Section 12.40 contains general requirements, including a point system for specific project features and techniques in order to determine compliance with the Ordinance, and defines exemptions from the Ordinance. LAMC Section 12.41 sets minimum standards for water delivery systems (irrigation) to landscapes. LAMC Section 12.43 defines the practices addressed by the Ordinance, of which two are applicable to stormwater management. The Heat and Glare Reduction practice states among its purposes the design of vehicular use areas that reduce stormwater runoff and increase groundwater recharge. The Soil and Watershed Conservation practice is intended to encourage the restoration of native areas that are unavoidably disturbed by development; to conserve soil and accumulated organic litter and reduce erosion by utilization of a variety of methods; and to increase the "residence time of precipitation" (i.e., the time between the original evaporation and the returning of water masses to the land surface as precipitation) within a given watershed. Implementation guidelines developed for the Ordinance provide specific features and techniques for incorporation into projects, and include water management guidelines addressing runoff, infiltration, and groundwater recharge. This Ordinance is incorporated into the LID Ordinance discussed below.

Los Angeles Municipal Code Section 64.72, Stormwater Pollution Control Measures for Development Planning and Construction Activities

LAMC Section 64.72, Stormwater Pollution Control Measures for Development Planning and Construction Activities, was added by Ordinance 173,494 in 2000 and sets forth requirements for construction activities and facility operations of development and redevelopment projects to comply with the requirements of the NPDES permit SUSMP requirements. The provisions of this section contain requirements for construction activities and facility operations of development and redevelopment projects to comply with the Land Development requirements of the Los Angeles County MS4 permit through integrating LID practices and standards for stormwater pollution mitigation, and maximize open, green and pervious space on all developments and redevelopments consistent with the City's Landscape Ordinance and other related

requirements in the Development Best Management Practices Handbook. The LID Ordinance (see below) applies first to a project in lieu of SUSMP. If a large project cannot meet the requirements of the LID Ordinance, then SUSMP measures are applied.

Los Angeles Floodplain Hazard Management Specific Plan Ordinance (No. 172,081)

On April 14, 2021 the City adopted an update to the Los Angeles Floodplain Hazard Management Specific Plan Ordinance (No. 172,081). This amendment ensured that the Specific Plan Ordinance conforms to federal regulations and maps relating to the NFIP. Conformance to the requirements of the NFIP is necessary in order to participate in the program. Requirements of the ordinance include: new construction and substantial improvements in flood-prone areas including service facilities to be designed to prevent water entry or accumulation, new or replacement water supply and sanitary sewer systems to minimize or eliminate infiltration and to require on-site waste disposal systems be located to avoid impairment or contamination, notification of neighboring communities of watercourse alterations or relocations, among other requirements.

Low Impact Development Ordinance (No. 181,899)

In 2011, the City adopted a Citywide Low Impact Development Ordinance (LID Ordinance) that amended the City's existing Stormwater Ordinance (LAMC Section Nos. 64.70 and 64.72, discussed above). The LID Ordinance, effective May 12, 2012, and updated in updated September 2015 (Ordinance No. 183,833), enforces the requirements of the Los Angeles County MS4 Permit. LID is a stormwater management strategy with goals to mitigate the impacts of increased runoff and stormwater pollution as close to their source as possible; and that promotes the use of natural infiltration systems, evapotranspiration, and the reuse of stormwater.

The goal of LID practices is to remove nutrients, bacteria, and metals from stormwater while also reducing the quantity and intensity of stormwater flows. Through the use of various infiltration strategies, LID is aimed at minimizing impervious surface area. Where infiltration is not feasible, the use of bioretention, rain gardens, green roofs, and rain barrels that will store, evaporate, detain, and/or treat runoff can be used (City of Los Angeles 2016).

The intent of LID standards is to:

- Require the use of LID practices in future developments and redevelopments to encourage the beneficial use of rainwater and urban runoff;
- Reduce stormwater/urban runoff while improving water quality;
- Promote rainwater harvesting;

- Reduce off-site runoff and provide increased groundwater recharge;
- Reduce erosion and hydrologic impacts downstream; and
- Enhance the recreational and aesthetic values in our communities.

The Citywide LID strategy addresses land development planning as well as storm drain infrastructure. Toward this end, LID is implemented through BMPs that fall into four categories: site planning BMPs, landscape BMPs, building BMPs, and street and alley BMPs. While the LID Ordinance and the BMPs contained therein comply with Los Angeles County MS4 Permit requirements for stormwater management, the MS4 requirements apply only to proposed new development and redevelopment of a certain size, primarily address stormwater pollution prevention as opposed to groundwater recharge, and vary over time as the permit is reissued every five years. The LID Ordinance provides a consistent set of BMPs that are intended to be inclusive of, and potentially exceed, SUSMP standards, apply to existing as well as new development, and emphasize natural drainage features and groundwater recharge in addition to pollution prevention in receiving waters. The LID Ordinance requires the capture and management of the greater of an 85th percentile rain event or the first 0.75-inch of runoff flow during storm events defined in the City's LID BMPs, through one or more of the City's preferred LID improvements in priority order: on-site infiltration, capture and reuse, or biofiltration/biotreatment BMPs, to the maximum extent feasible.

Per the City's 2016 LID Manual's Figure 3.3 and Section 4.1, the City's preferred LID improvement is on-site infiltration of stormwater, site since it allows for groundwater recharge and reduces the volume of stormwater entering municipal drains. If project site conditions are not suitable for infiltration, the City requires on-site retention via stormwater capture and reuse. Should capture and reuse be deemed technically infeasible, high efficiency bio-filtration/ bioretention systems should be utilized. Lastly, under the LID Ordinance (LAMC Section 64.72 (C) 6), as interpreted in the LID Manual, if no single approach listed in the LID Manual is feasible, then a combination of approaches may be used.

The LID Ordinance applies first to a project in lieu of SUSMP. If a large project cannot meet the requirements of the LID Ordinance, then SUSMP applies instead.

2020 Floodplain Management Plan

The 2020 Floodplain Management Plan (FMP) identifies 78 flood hazard mitigation actions to mitigate impacts of flood hazards in the Los Angeles area. These include coordinating local floodplain management activities with federal, state and regional programs, educating residents on the flooding hazard, loss reduction measures, and the natural and beneficial functions of floodplains, and fulfilling planning requirements for obtaining state or federal assistance.

Local Hazard Mitigation Plan

The Local Hazard Mitigation Plan (LHMP) is a regulatory document that includes long-term and short-term policies, programs, projects, and other activities to alleviate the death, injury, and property damage that can result from a disaster. The LHMP complies with federal and state hazard mitigation planning requirements to establish eligibility for funding under FEMA grant programs.

Water Quality Compliance Master Plan for Urban Runoff

The Water Quality Compliance Master Plan for Urban Runoff (Water Quality Compliance Master Plan) was developed by the Department of Public Works, Bureau of Sanitation, Watershed Protection Division, and was adopted in April 2009.

The Water Quality Compliance Master Plan addresses planning, budgeting, and funding for achieving clean stormwater and urban runoff for the next 20 years and presents an overview of the status of urban runoff management within the City. The Water Quality Compliance Master Plan identifies the City's four watersheds; summarizes water quality conditions in the City's receiving waters as well as known sources of pollutants; summarizes regulatory requirements for water quality; describes BMPs required by the City for stormwater quality management; and discusses related plans for water quality that are implemented within the Los Angeles region, particularly TMDL Implementation Plans and Watershed Management Plans in Los Angeles.

Stormwater Program – Los Angeles County MS4 Permit Citywide Implementation

The Watershed Protection Division of the Department of Public Works, Bureau of Sanitation is responsible for stormwater pollution control throughout the City in compliance with the Los Angeles County MS4 Permit. The Watershed Protection Division administers the City's Stormwater Program, which has two major components: Pollution Abatement and Flood Control. The Watershed Protection Division publishes the two-part Development Best Management Practices Handbook that provides guidance to developers for compliance with the Los Angeles County MS4 permit through the incorporation of water quality management into development planning. The Development Best Management Practices Handbook, Part A: Construction Activities, provides specific minimum BMPs for all construction activities. The Development Best Management Practices Handbook, Low Impact Development Manual, Part B: Planning Activities (5th edition, May 2016) (LID Handbook) provides guidance to developers to ensure the post-construction operation of newly developed and redeveloped facilities comply with the Developing Planning Program regulations of the City's Stormwater Program. The LID Handbook assists developers with the selection, design, and incorporation of stormwater source control and treatment control BMPs into project design plans, and provides an overview of the City's plan review and permitting process. The LID

Handbook addresses the need for frequent and/or regular inspections of infiltration facilities in order to ensure on-site compliance of BMP standards, soil quality, site vegetations, and permeable surfaces. These inspections are required to guarantee that facilities follow all proprietary operation and maintenance requirements.

During the development review process, project plans are reviewed for compliance with the City's General Plan, zoning ordinances, and other applicable local ordinances and codes, including stormwater requirements. Plans and specifications are reviewed to ensure that the appropriate BMPs are incorporated to address stormwater pollution prevention goals.

4.8.3 ENVIRONMENTAL IMPACTS

Thresholds of Significance

Based on Appendix G of the *CEQA Guidelines*, implementation of the updates to the House Element and Safety Element would have significant impact related to flood flows and drainage if it would:

- **Threshold 4.8-1:** Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would impede or redirect flood flows.

Methodology

Baseline information for the analysis was compiled from a review of data and reports published by state agencies, environmental documents for projects in the vicinity, as well as information compiled and evaluated by the City of Los Angeles in conjunction with its Stormwater Management and Hazard Mitigation plans. The result of the effort is a general and qualitative analysis of the types of hydrologic changes pertaining to flooding and drainage patterns that could be expected relative to the implementation of the Proposed Project.

Consideration is given to relevant regulations and requirements that would serve to minimize pollutants in stormwater runoff and restrict discharges into surface water. There is a comprehensive regulatory framework implemented at the State, County, and City level to reduce the impacts of effects related to storm drainage, urban pollutants, and flood hazards. Compliance with these regulations is required, not optional, and must be demonstrated to have been incorporated in the project's design before permits for project construction would be issued. Based upon the comprehensiveness of the regulations and the requirement that compliance must be demonstrated to have been incorporated in the project's design before permits are issued, the assumption that compliance with all applicable laws, regulations, and

standards will ensue is reasonable. Therefore, the analysis presented herein assumes compliance with all applicable laws, regulations, and standards. The impact analysis is based on several factors, including the degree to which existing land uses and pervious surfaces in the Proposed Project area would change, and the applicable thresholds of significance for hydrology and water quality.

Regulatory Compliance Measures

The City has established regulatory requirements to reduce or eliminate risks related to hydrology and water quality. Refer to the Initial Study (Appendix A) for a more comprehensive list of RCMs related to hydrology and water quality that would be required for any future development under the Housing Element Update. The following RCMs are specifically related to flood flows and drainage and the impact analysis below:

- **RCM-WQ-3 (LID Plan):** Prior to issuance of grading permits, the Applicant is required to submit a Low Impact Development (LID) Plan and/or Standard Urban Stormwater Mitigation Plan (SUSMP) to the City of Los Angeles Bureau of Sanitation Watershed Protection Division for review and approval. The LID Plan and/or SUSMP shall be prepared consistent with the requirements of the Development Best Management Practices Handbook.
- **RCM-WQ-4 (Best Management Practices):** BMPs need to be designed to retain or treat the runoff from a storm event producing 0.75 inch of rainfall in a 24-hour period, in accordance with the Development Best Management Practices Handbook Part B Planning Activities. A signed certificate from a licensed civil engineer or licensed architect is required to confirm that the proposed BMPs are sufficient to meet this numerical threshold standard.
- **RCM-WQ-5 (Alteration of a State or Federal Watercourse):** Development is required to comply with the applicable sections of the federal Clean Water Act (CWA) and California's Porter Cologne Water Quality Control Act (Porter Cologne). Prior to the issuance of any grading, use of land, or building permit which may affect an existing watercourse, the applicant is required to consult with the following agencies and obtain all necessary permits and/or authorizations, to the satisfaction of the Department of Building and Safety. Compliance is be determined through written communication from each jurisdictional agency, a copy of which shall be submitted to the Environmental Review case file for reference:
    - **United States Army Corps of Engineers.** The applicant is required to obtain a Jurisdictional Determination (preliminary or approved), or a letter otherwise indicating that no permit is required. Contact: Aaron O. Allen, Chief - North Coast Branch, Regulatory Division, 805-585-2148.
    - **State Water Resources Control Board.** The applicant is required to consult with the 401 Certification and Wetlands Unit and obtain all necessary permits and/or authorizations, or a letter

otherwise indicating that no permit is required. Contact: 401 Certification and Wetlands Unit, Los Angeles Region, 320 W 4th Street, #200, Los Angeles, CA 90013, (213) 576-6759.

- **California Department of Fish and Wildlife**. The applicant is required to consult with the Lake and Streambed Alteration (LSA) Program and obtain a Streambed Alteration Agreement, or a letter otherwise indicating that no permit is required. Contact: LSA Program, 3883 Ruffin Road, San Diego, CA 92123, (858) 636-3160.

- **RCM-WQ-6 (Flooding/Tsunami):** Development is required to comply with the requirements of the Flood Hazard Management Specific Plan, Ordinance No. 172081 effective July 3, 1998, updated April 14, 2021.

Project Impacts and Mitigation Measures

Threshold 4.8-1	Would the Proposed Project substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river through the addition of impervious surfaces, in a manner which would impede or redirect flood flows?

Impact 4.8-1 Housing developments accommodated by the Housing Element Update could occur on sites located in either 100-year, 500-year floodplain areas or dam inundation zones which could potentially impede or redirect flood flows. However, development under the Proposed Project would be required to comply with federal, State, and local construction and design requirements which would reduce this impact to a less than significant level. For those projects that have unusual circumstances where existing regulations do not address potential impacts, imposition of Mitigation Measure 4.8-1 would reduce impacts to ***less than significant with mitigation***. Impacts related to the Safety Element Update would be ***less than significant.***

Floodplain Areas

The Proposed Project would apply to the entire geographic area located within the boundaries of the City, which encompasses 467 square miles. The City contains areas subject to 100-year and 500-year floods, which are mapped by FEMA. The terms "100-year flood" and "500-year flood" describe flood recurrence intervals in which a flood of that magnitude has a one percent or 0.2 percent chance of occurring in any given year, respectively. In general, areas subject to flood risk include the Los Angeles River and other river and stream channels and embankments, areas surrounding reservoirs such as the Hollywood Reservoir and Hansen Dam, and coastal areas (City of Los Angeles 2018c). However, areas subject to 500-

year floods may also include areas of the City that are not near reservoirs or waterways, such as portions of Central and South LA. Build out of the RHNA would be primarily located on infill sites in urban areas which are almost entirely paved and/or developed with structures. Nonetheless, there is also potential for future housing accommodated by the Proposed Project to be built in less developed parts of the City, including portions of the City's hillsides. The Proposed Project could potentially include both new housing development and rehabilitation of existing housing development in areas that are either in a 100-year or 500-year floodplain. Build out of the RHNA under the Housing Element Update could increase impervious surface cover on sites that are currently undeveloped further reducing potential for flood flows to infiltrate the groundcover thus increasing runoff and redirecting downstream flood flows. Furthermore, development and redevelopment within floodplain areas may result in larger massing and overall footprint and could potentially result in a greater impediment to flood flows.

The update to the Safety Element will integrate Goals, Policies, and Objectives from other citywide long-range planning documents into the General Plan. Two of the plans that will be integrated into the Safety Element by reference are the 2020 Floodplain Management Plan and the Local Hazard Mitigation Plan, which was last updated in 2018. Both plans are hazard management planning documents and include risk-based information on flooding hazards that most affect Los Angeles, including major flood events, dam failure, tsunami, and climate change. The compilation of the programs identified in these planning efforts into a single document will further the City's ability to plan for and mitigate flooding risk. As a result, potential impacts related to flood hazards, dam inundation, and the potential for the alteration of natural drainages and flood flows under the Safety Element Update would be ***less than significant***. Similarly, the programs and planning efforts under the Safety Element Update would not result in physical changes that would adversely impact surface water quality, groundwater levels, and groundwater quality or any other hydrology impact. Therefore, potential hydrology impacts associated with the Safety Element would be ***less than significant***.

The types of housing units anticipated under the Housing Element Update would generally fall into five categories of development projects - multi-family residential development; single-family residential development; accessory dwelling units (ADU); mixed use development; and conversion and/or rehabilitation of existing nonresidential, residential and mixed-use structures to be used for housing. Impacts associated with these different housing types are discussed and informed by a review of environmental assessments of housing development in the City (see Table 4-2). A review of the housing development in the City in Table 4-2 shows none of the projects had significant and unavoidable impacts. Three required mitigation for hydrology and only one imposed mitigation related to this impact category (Hidden Creek discussed below). The Soul Project mitigation was for a different impact category and

related to site contamination and the mitigation was the same as the hazard mitigation (Soul Project SCEA at 5-137 to 138.)

Further discussion of this is provided below:

- **Multi-family residential:** Multi-family residential projects may range in size from small apartment buildings with 2-10 units to larger apartment buildings and high-rise structures with hundreds of units. Large multi-family development projects may have the potential to result in more substantial impacts compared to smaller multi-family or single-family developments due to their greater footprint and scale, particularly if located in the floodplain areas shown in Figure 4.8-1. However, multi-family projects would likely be located in the High and Highest Resource Areas as a result of the Rezoning Program, as shown in Figure 3-5, and in areas where larger multifamily development is allowed today, such as Regional Centers and areas near transit. Potential flood waters would be directed into existing storm drains that are currently receiving surface water runoff under existing conditions. However, in the event that a project site is located in a flood zone, a hydrology study may be required to ensure consistency with applicable regulations. Therefore, significant alterations to existing drainage patterns in highly urban areas of the City would not occur. For example, as listed in Table 4-2, an MND for the 8548, 8552, and 8554 N. Glenoaks Boulevard Project was prepared for a 54-unit multi-family residential apartment building on a project site that is located in a flood zone. The analysis found that the potential impacts associated with flooding were less than significant because potential flooding would be contained by the existing storm drain and no further hydrology study was needed.
- **Single-family residential:** Single-family residential projects may range in size and scale from smaller single-family homes to larger single-family homes, and from small-lot subdivisions to multi-property single-family subdivisions. Residential subdivisions and other comparatively large-scale single-family development projects may have greater potential to directly or indirectly impact flood flows when in a floodplain area. In addition, as described below, development and redevelopment would be required to comply with State and local regulatory requirements.
- **ADUs**: ADUs include attached ADUs created through a building addition or conversion of existing floor area and detached ADUs of various scales. The development of an ADU would be less likely than other development types to involve the redirecting of flood flows because an ADU is typically subordinate to the existing residential building with which it shares a property and, therefore, results in less expansive development and minimal potential to alter drainage patterns relative to existing conditions.
- **Mixed use development:** Mixed use development could range in size and scale from neighborhood commercial mixed use with smaller nonresidential uses, to high-rise mixed-use with larger nonresidential uses. Similar to multi-family residential development, large-scale mixed-use

development projects may have greater potential to impede or redirect flood flows or drainage patterns when located in a floodplain area due to greater impervious surface cover and/or larger building footprints and massing. However, mixed use projects would likely be located in the High and Highest Resource Areas as a result of the Rezoning Program, as shown in Figure 3-5, and in areas where larger multifamily development is allowed today, such as Regional Centers and areas near transit. Storm water would be directed into existing storm drains that are currently receiving surface water runoff under existing conditions. Therefore, significant alterations to existing drainage patterns in highly urban areas of the City would not occur. In addition, as described below, development and redevelopment would be required to comply with State and local regulatory requirements.

The analysis of hydrology impacts in the 2800 Casitas Avenue project is consistent with hydrology impact analysis for mixed use development projects in the City. The 2800 Casitas Avenue project in Northeast Los Angeles near the LA River involves the demolition of an existing 117,000-square-foot manufacturing/warehouse/production building on an approximately 5.7-acre (248,190-square-foot) site, as well as the construction of a new 487,872-square-foot mixed-use development, consisting of up to 419 multi-family residential units (including 35 units for Very Low Income households), up to 64,000 square feet of commercial space, and a seven-story parking structure. Commercial uses at the 2800 Casitas Avenue project would include a mix of ground-floor restaurant uses and office space, and a rooftop urban farm/greenhouse.

In analyzing the hydrology impacts to surface water hydrology, the EIR found the following for construction, operation, and cumulative impacts:

Construction

Construction activities for the Project would include demolition of the existing improvements and site preparation, followed by building construction and the installation of hardscape and landscape. The proposed Project would involve excavations to a maximum depth of 15 feet below grade level. These construction activities would have the potential to temporarily alter existing drainage patterns and flows on the Project Site by exposing the underlying soils, modifying flow direction, and rendering the Project Site temporarily more permeable. Exposed and stockpiled soils could be subject to erosion and conveyance into nearby storm drains during storm events. In addition, on-site watering activities used to reduce airborne dust could contribute to pollutant loading in runoff.

Since the construction site would be greater larger than one acre, the Project would be required to obtain coverage under the NPDES Construction General Permit. In accordance with the permit requirements, the Project would implement a SWPPP that specifies BMPs and erosion control measures during construction to manage runoff flows. These BMPs would be designed to contain stormwater or construction watering on the Project Site such that runoff will not impact off-site drainage facilities or receiving waters. An Erosion

Control Plan, prepared and implemented in accordance with City grading permit regulations (LAMC Chapter IX, Division 70), would contain and treat stormwater or construction watering on-site so that runoff does not result in substantial pollution or impact off-site drainage facilities or receiving water. As such, flow directions and runoff volumes during temporary construction activities would be controlled.

Thus, with compliance with NPDES Construction General Permit requirements, including implementation of a SWPPP and BMPs, as well as compliance with applicable City grading permit regulations, Project construction would not substantially alter the existing drainage pattern of the Project Site in a manner that would result in substantial erosion or siltation. As such, impacts from erosion or siltation during construction would be less than significant.

[…]

The volume and quality of surface runoff would be controlled by BMPs as required under the SWPPP, and no construction processes would require excessive use of water that would generate greater surface flow from the Project Site than under existing conditions. Construction activities would not generate an increase in surface water runoff. Therefore, construction of the proposed Project would not increase the rate or amount of surface runoff in a manner, which would result in flooding on-or off-site, and impacts associated with the potential for off-site flooding would be less than significant.

Operation

During proposed Project operations, surface water runoff would continue to be directed to existing storm drain infrastructure. Surface water runoff would be controlled through site design and engineering practices in accordance with the City of Los Angeles Stormwater and Urban Runoff Pollution Control Ordinance (Ordinance No. 172,176) and the LID Ordinance (Ordinance No. 181,899), which would ensure the Project Site, once operational, does not contribute to substantial erosion or siltation off-site. As such, impacts from erosion or siltation during long-term operation would be less than significant.

[…]

The Project Site is approximately 100 percent impervious under existing conditions. The proposed Project would include approximately 25,005 square feet of biofiltration planters for stormwater treatment, of a total lot area of 248,190 square feet. Therefore, the percentage of impervious surfaces would be reduced to 90 percent under the proposed Project. Surface water runoff under proposed conditions would comply with the City's LID Ordinance (Ordinance No. 181,899). Compliance with the LID Ordinance would ensure the Project Site is developed with BMPs designed to retain or treat the runoff from a storm event producing ¾-inch of rainfall in a 24-hour period or the rainfall from an 85th percentile 24-hour runoff event (whichever is greater). As such, the volume of post-development surface water runoff would be reduced with the proposed Project as compared to the existing conditions. Therefore, operation of the proposed Project would not

increase the rate or amount of surface runoff in a manner, which would result in flooding on-or off-site, and impacts associated with the potential for off-site flooding would be less than significant.

[…]

As mentioned previously, a 66-inch diameter storm drain line, which is owned and maintained by the City, is located adjacent to the Project Site along Casitas Avenue and along the eastern side of the Project Site. With the exception of some trees within the surface parking lot, the Project Site is currently approximately 100 percent impervious and all surface water is directed off-site to the adjacent storm drain system. The proposed Project would continue to direct surface water and stormwater run-off onto the existing storm drain system. Further, the proposed Project would slightly decrease the rate of surface runoff, once operational, as some detention would be provided by the proposed biofiltration/bioretention system.

Additionally, the proposed Project would include approximately 25,005 square feet of biofiltration planters for stormwater treatment, of a total lot area of 248,190 square feet. Therefore, the percentage of impervious surfaces, which is approximately 100 percent under existing conditions, would be reduced to 90 percent under the proposed Project, overall decreasing the flow rates of stormwater runoff discharging into the Los Angeles River. Therefore, the proposed Project would not substantially alter the existing drainage pattern of the Project Site or area, including through the alteration of the course of a stream or Los Angeles River, or substantially increase the rate or amount of surface runoff, in a manner that would result in flooding on- or off-site. As such, impacts would be less than significant.

Cumulative

The geographic context for the cumulative impact analysis on surface water hydrology is the Los Angeles River Watershed. The Project, in conjunction with forecasted growth in the Los Angeles River Watershed, could cumulatively increase stormwater runoff flows. Without detailed drainage plans, it is not possible to determine whether any of the related projects would discharge stormwater into the same storm drainage facilities as the proposed Project. Furthermore, in accordance with City requirements, related projects and other future development projects would be required to implement BMPs to manage stormwater in accordance with LID guidelines. Furthermore, the City of Los Angeles Department of Public Works would review each future development project on a case-by-case basis to ensure sufficient local and regional infrastructure is available to accommodate stormwater runoff. Moreover, the Project would result in reduced stormwater runoff as compared to existing conditions. As such, the proposed Project's contribution would not be cumulatively considerable, and cumulative impacts to surface water hydrology would be less than significant. (2800 Casitas Avenue Recirculated Portion of the DEIR at IV.P-126 to 133)

While the 2800 Casitas Avenue project is of a much larger scale than typical mixed use projects, the hydrology analysis is consistent with almost all other housing projects of any type in finding that

existing regulatory compliance measures will ensure no significant impact related to redirecting flood flows.

- **Conversion and/or rehabilitation**: Existing nonresidential, residential and mixed-use structures could be converted or rehabilitated for new residential uses. Impacts to flood flows and drainage patterns from these conversions or rehabilitated buildings would generally not be expected extend beyond what is currently affected by the existing conditions, as such projects would occur at currently developed sites. Therefore, minimal potential exists for these types of projects to redirect or impede flood flows.

Development built under the Proposed Project and within a floodplain area would be required to comply with development standards set forth in the City's Zoning Ordinance. The LAMC also sets forth design standards and basic provisions relating to flood hazards in several sections, including Section 91.1612 which addresses high velocity flood loads and Section 91.5.401.1 which requires full compliance with the 2019 California Residential Code in relation to development in flood hazard areas. Additional sections of the LAMC such as sections 62.105 Construction "Class B" Permit, Sections 12.40 through Section 12.43 Landscape Ordinance, Section 64.72 Stormwater Pollution Control Measures, and Sections 12.40 through 12.43 which includes the City's Low Impact Development (LID) Ordinance, all help mitigate against increased runoff to ensure no net increase in peak runoff. Furthermore, all development projects would be required to comply with policies and design standards set forth in the City's Flood Hazard Management Specific Plan. Applicable standards set forth in the Flood Hazard Specific Plan include but are not limited to:

- No natural or man-made drainage course shall be altered or relocated without prior notification to all adjacent communities affected or potentially affected by such alteration or relocation;
- No natural or man-made drainage course shall be altered or relocated in any way which would diminish its flood carrying capacity; and
- Adverse cumulative effects of new development or development already existing in floodplains shall be considered in determining whether to issue a permit, and the new development shall not be approved unless it can be adequately demonstrated that the project will not increase the exposure of existing development to flood-related hazards.

Housing development accommodated by the Housing Element Update would be required to comply with the above policies to reduce potential impacts to existing drainage patterns. Furthermore, all reasonably foreseeable development would be required to comply with all other policies and programs outlined in additional regulatory and advisory documents such as the Local Hazard Mitigation Plan and the Floodplain Management Plan, much of which will be incorporated into the General Plan through the Safety Element update. All new development would be required to comply with the regulations described in

RCM-WQ-5 (Alteration of a State or Federal Watercourse) to minimize the potential for impacts to jurisdictional watercourses, including impacts that may result in redirection of flood flows. In addition, as specified in RCM-WQ-6 (Flooding/Tsunami), all project development that would occur in a flood risk zone would be subject to restrictions and requirements established by the City's permitting process and would be required to incorporate appropriate City and FEMA flood plain management measures in the design of new buildings, as described in the Floodplain Management Plan and enforced by the Department of Building and Safety. Compliance with federal, State, and local regulatory measures would reduce the potential for altering drainage patterns by redirecting flood flows. Given the above the considerations, residential development or redevelopment proposed in a floodplain area would not significantly impede or redirect flood flows. However, without specific project details it is not possible to determine that mitigation measures will not be required, such as for the Hidden Creek Estates project discussed below. Therefore, impacts from the Housing Element Update related to impeding or altering flood flow for projects in a flood plain area would be ***potentially significant***.

As stated above, impacts related to the Safety Element would be ***less than significant.***

Non-Floodplain Areas

As stated above, the Proposed Project would encompass the entire planning area of the City of Los Angeles. Reasonably foreseeable development under the Housing Element Update may also be developed outside of the City's floodplain areas. In general, the potential to impede or redirect flood flows due to alteration of drainage patterns is lessened when outside designated floodplain areas. (See discussion of 2800 Casitas Avenue project above.) It is anticipated that most of the project development that occurs under the Proposed Project will be infill development in highly developed portions of the City. Proposed infill development would not be expected to substantially alter or change natural drainages and flood flows relative to what currently exists. However, potential new development in currently undeveloped portions of the City, including hillside development, has the potential to affect flood flows, either on-site or off-site due to the alteration of downstream hillside drainage patterns. Development and redevelopment under the Proposed Project, including potential hillside development, would be required to comply with Section 64.72 of the LAMC, which fully implements the City's Low Impact Development (LID) requirements for compliance with the County of Los Angeles MS4 permit. Under the City's LID requirements, development and redevelopment projects must manage and capture stormwater runoff from the 85th percentile, 24-hour storm and must implement hydromodification measures to the fullest extent feasible to minimize impacts to natural drainage systems. Compliance with the City's LID Ordinance, including the capturing and managing of stormwater runoff while implementing hydromodification to the greatest extent, would reduce potential impacts to natural drainages and flood flows. Therefore, potential development under the

Proposed Project that is located outside the City's floodplain areas, including hillside development, would not substantially impede or redirect flood flows, and this impact would be less than significant.

Only one project in the environmental assessments reviewed for this EIR included mitigation for hydrology related to altering drainage patterns. The Hidden Creek project involved annexing 285-acre project to the City in the northwestern portion of the San Fernando Valley. The project involved subdividing one third of the project area into 188 single family lots, a public park and an equestrian center. 131.5 acres would be preserved as open space. The site conditions were undeveloped land located west of Porter Ranch, situated between the Browns Canyon Wash and the Mormon Canyon Creek. The project was located on a sloped area, not in a flood area, that was designated for minimal flooding. The project included the construction of an onsite retention basin to collect site run-off, treat it before being released to the Browns Canyon Wash. The EIR found the following potential impacts related to this impact criteria:

> *Grading and construction activities on the project site would result in temporary changes to the movement and flow of surface water. Upon completion of grading and construction, an increase in impervious surfaces from the project would alter the direction of surface water from its natural course into the retention and water treatment basin located on the project site. The retention and water treatment basin is designed to hold the surface runoff until after a peak storm event, but a certain amount of runoff would overflow and drain outward. The escaped runoff would flow south out of the retention and water treatment basin, which is located at the southern end of the project site. With implementation of mitigation measure MM-WR-1, surface runoff would be held in the retention and water treatment basin to facilitate a slow release downstream as well as to allow the water the opportunity to seep into the ground; as such, the quantity of surface water runoff from the project site downstream would be slowed. Furthermore, compliance with all applicable water quality regulations, including the Los Angeles County MS4 Permit and current SUSMP requirements, as well as all applicable BMPs in accordance with the SWPPP, City's LID Ordinance, and Irrigation Guidelines would reduce the total volume of surface water that flows off of impermeable surfaces. Regulatory compliance and the implementation of mitigation measure MM-WR-1 and would reduce impacts to a less than significant level. (Hidden Creek DEIR at IV.H-21 to 22)*

The following mitigation was imposed on the project:

> *MM-WR-1: Wetland flora shall be planted in the retention basin to help remove nitrogen, phosphorus, and other contaminants from the surface water before it is discharged into the Browns Canyon Wash or absorbed into the ground. Non-invasive weed species shall be researched and prohibited from the retention basin. Vegetated swales and infiltration trenches shall be incorporated into the design of the retention basin. See MM-WR-7 for implementation of infiltration trenches in conjunction of the retention basin. Vegetated swales are open, shallow channels with vegetation covering the side slopes and bottom that collect and slowly convey runoff to downstream*

discharge points. Vegetated swales can serve as part of a stormwater drainage system and can replace curbs, gutters, and storm sewer systems.

MM-WR-7: The project design shall incorporate an infiltration trench, which is a long, narrow, rock- filled trench with no outlet that receives stormwater runoff. Runoff is stored in the void space between the stones and infiltrates through the bottom and into the soil matrix. Infiltration trenches perform well for removal of fine sediment and associated pollutants. Pretreatment using buffer strips, swales, or detention basins is important for limiting amounts of coarse sediment entering the trench which can clog and render the trench ineffective. (Hidden Creek MMP)

The Hidden Creek project, involving over 280 acres of undeveloped land and requiring annexation of land to the City, and building its own retention basin, is not a typical housing project in the City and is not of the type that would be expected to provide much if any of the housing development under the Housing Element Update. The mitigation imposed was to the design of the proposed retention basin. Subsequent housing projects that would have similar hydrology aspects would foreseeably be subject to extensive development review to address any unique and unusual hydrology impacts.

Development of undeveloped land in the City is more common on single family lots in the hillsides. The York Residence is a more typical type of development in the hillsides, although on a larger site than typical. The York Residence project located in the Hollywood Community Plan area, proposed to construct a 9,250 square foot single family home on an approximately 40-acre lot. The project site was in the Santa Monica Mountains in the Lake Hollywood section of the City on a lot abutting undeveloped areas. Construction involved constructing a 20' private driveway/fire access and grading 37,000 cubic yards of cut and 37,000 cubic yards of fill. The MND found less than significant impacts to hydrology based on compliance with existing regulations.

Based on the above, although impacts from the Proposed Project related to impeding or redirecting flood flow non-flood plain areas are unlikely, they could occur with unusual projects. Therefore, impacts related to the Housing Element Update would be potentially significant.

As stated above, impacts related to the Safety Element would be ***less than significant.***

Dam Inundation Areas

The City of Los Angeles includes large portions of the City that are located in dam inundation zones. The City's Local Hazard Mitigation Plan identifies dam inundation zones to primarily be found in the central and northern portions of the City and cover a large area of developed, built land. Dam inundation is a type of flood flow resulting from dam failure due to events such as high precipitation, seismic events, or

structural degradation. Dam inundation poses particular concern for development such as residential development due to the potential structural damage that may result from this type of flooding. Given that large, developed portions of the City are located within dam inundation zones, there is high potential for development under the Proposed Project to be located in such zones. Though dam inundation has been identified in the City as a hydrological hazard, the City actively monitors dams and reservoirs during storms. Furthermore, the City regularly inspects the conditions and structural integrity of nearby dams and has retrofitted all existing water storage facilities pursuant to the 1972 State Dam Safety Act. As a result of these measures the City has taken, the likelihood of dam failure is low. In the unlikely event of dam failure, housing development under the Proposed Project would not be of a scale to substantially redirect such extreme flood flows. Furthermore, the Proposed Project does not involve the construction of new dams or other water storage facilities which would impede and redirect flood flows or otherwise risk release of substantial flood flows downstream. Therefore, Proposed Project impacts to flood flows as a result of dam inundation would be ***less than significant***.

Mitigation Measures

4.8-1 Drainage Pattern Alterations and Flood Control.

For any development project that the City has determined based on an expert study will impede or redirect flood flows even with compliance with existing regulations and RCMS, the project shall develop and implement a project-specific Stormwater Pollution Prevention Plan (SWPPP) for compliance with the Clean Water Act's National Pollutant Discharge Elimination System (NPDES) program. The purpose of the SWMP, similar to the SWPPP, is to maintain during construction and operations the existing drainage patterns of the site and vicinity to the maximum extent feasible, to avoid downstream impacts associated with flooding or water quality degradation from ground disturbance during construction. To address the potential for long-term drainage pattern alterations associated with the placement of future development projects in areas where no development is currently present, the SWMP must also include operational and maintenance BMPs; such BMPs may include but would not be limited to the upkeep of landscaped/vegetated swales to dissipate stormwater runoff, or the maintenance (dredging and disposal of accumulated materials) of detention basins placed to capture stormwater runoff resulting from the project.

Significance after Mitigation

As discussed herein, existing regulations are anticipated to reduce all impacts from housing development projects accommodated by the Housing Element Update related to impeding or redirecting flood flows to a less than significant level, absent unusual project or unique circumstances. Any project that would be anticipated to cause impacts to flood flows notwithstanding existing regulations would require

discretionary review. With imposition of Mitigation Measure 4.8-1, impacts would be reduced to a ***less than significant*** level.

Cumulative Impacts

The geographic scope for this analysis is the City of Los Angeles as floodplain areas span across large portions of the City. Growth within the City's planning area would generally increase the intensity of uses and residential density citywide, which would generally increase impervious surface area and surface runoff. However, new development would be subject to current regulations derived from the Los Angeles County NPDES MS4 permit (i.e., SUSMP, LID Ordinance, LID Handbook), which require detention/retention of surface water such that peak runoff levels do not increase. Compliance with these requirements would minimize impacts to regional surface hydrology and, in instances involving redevelopment of developed sites, peak runoff levels may actually decline. As discussed above, build out of the RHNA under the Housing Element Update could be located in 100-year and 500-year flood hazard areas, as these floodplains span throughout large portions of the City. New development in these areas would be subject to local flood control requirements, which require that the design of developments avoids 100-year flood hazards and does not substantially increase flood risk on other properties. In addition, the update of the Safety Element will formally integrate Goals and Programs related to the management of flooding risk contained in the Local Hazard Mitigation Plan and the 2020 Floodplain Management Plan. Furthermore, citywide housing unit growth would increase the exposure of people and property to flooding from any of these dams. However, as stated above, the risk would be low and new development would not increase the potential for a flood event at any of these dams. Based on this information, the Proposed Project would not have cumulatively considerable contributions to a significant cumulative impact. Cumulative impacts would be ***less than significant*** related to redirecting or impeding flood flow.

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4.9 LAND USE AND PLANNING

This section summarizes the City's land use characteristics and overall land use patterns and addresses impacts related to the City's land uses and planning efforts that may occur due to the adoption of the Housing Element Update. Key sources used to gather information on the City's zoning and land use policies include the Los Angeles Municipal Code (LAMC), General Plan, and the Southern California Association of Governments (SCAG) 2020-2045 Regional Transportation Plan and Sustainable Communities Strategy (RTP/SCS). As discussed in the Initial Study (see Appendix A), the Housing Element Update was found to have no impacts associated with the physical division of an established community; therefore, further analysis of such impacts was scoped out of this EIR. In addition, all impacts from the Safety Element associated with land use and planning were found to be less than significant in the Initial Study and are subsequently not discussed in this EIR.

4.9.1 ENVIRONMENTAL SETTING

The City of Los Angeles encompasses approximately 467 square miles and is comprised of 35 separate Community Plan Areas (CPA), each with diverse and varying land uses. Residential land uses make up the largest portion of the City in terms of acreage, whereas commercial and office land uses are primarily located along arterial corridors, are grouped as nodes at principal intersections, or are grouped in larger scale nodes and City centers. Industrial uses also occur throughout the City but are primarily grouped in major clusters along rail lines, near the Los Angeles International Airport (LAX), and near the Port of Los Angeles. Institutional uses are dispersed throughout the City, with concentrations in Downtown Los Angeles (i.e., the Los Angeles Civic Center) and near major educational facilities, such as University of California, Los Angeles (UCLA); University of Southern California (USC); California State University, Northridge (CSUN); and California State University, Los Angeles (CSULA). Other public facilities of citywide importance also include the Los Angeles Public Library and Union Station. Open space and recreational uses include parks (e.g., Griffith Park and Grand Park), golf courses, beaches, and other outdoor areas such as the Santa Monica Mountains, Verdugo Mountains, and Ballona Wetlands. Other major recreational and sports facilities in the City include the Dodger Stadium, Staples Center, and the Los Angeles Memorial Coliseum.

Figure 3-1 of Section 3, *Project Description*, shows the general boundaries of the City limits in the context of the greater Los Angeles County area. As shown in Figure 3-1, the City is bordered by multiple cities, including Santa Clarita, Calabasas, Glendale, Pasadena, Alhambra, Monterey Park, Huntington Park, Compton, Lynwood, Carson, Long Beach, Torrance, Gardena, Hawthorne, El Segundo, Inglewood, El Segundo, Beverly Hills, South Gate, West Hollywood, San Fernando, Culver City, Burbank, and Santa Monica, among others. The City is also situated between the San Gabriel Mountains to the north; the

Verdugo Mountains, San Rafael Hills, and San Gabriel Valley to the east; the Santa Susana Mountains and Santa Monica Mountains to the west, and the Pacific Ocean to the west and south. A grid system of east-west and north-south roadways, including arterials, collectors, and local streets, provide vehicular access throughout the City.

Current General Plan Land Use Designations

Adopted in 1996, the City's General Plan Framework Element (General Plan Framework) is a strategy for long-term growth and development, setting a citywide context for the update of the 35 Community Plans and other citywide general plan elements. While the City's Framework Element incorporates a diagram that depicts the generalized distribution of centers, districts, and mixed-use boulevards throughout the City, the specific General Plan Land Use Designations are established and applied by the City's 35 Community Plans, which comprise the Land Use Element of the General Plan.

The following section summarizes the General Plan Framework land use designations throughout the City, as applied by the City's 35 Community Plans. Figure 3-2 and Figure 3-3 of Section 3, *Project Description*, respectively illustrate the boundaries of the 35 CPA and the pattern of existing land use designations throughout the City, broadly consisting of residential, commercial, industrial, open space, and public facilities land uses (City of Los Angeles 1996).

- **Residential.** Residential land use designations in the City consist of low-density and multi-family residential. Low-density residential ranges from one to nine dwelling units per acre (du/ac) using the categories Minimum, Very Low, Very Low I, Very Low II, and Low. Multi-family residential ranges from Low Medium I (10-17 du/ac), Low Medium II (18-29 du/ac), Medium (30-55 du/ac), High Medium (56-109 du/ac), and High (110-218 du/ac), although some community plans encourage greater densities. In addition, residential uses are permitted in Commercial land use designations.

  The Framework Element emphasizes the need to balance existing residential neighborhoods with the need to allow for increased residential development, particularly in areas near public transit corridors and stations and jobs. The Framework Element expects to maintain existing multi-family neighborhoods and increase the quality of new multi-family neighborhoods throughout the City.
- **Commercial.** Commercial land use designations in the City consist of Regional, Community, Neighborhood, Highway Oriented, Limited, and General Commercial. Regional Commercial areas allow for the highest development potential and widest variety of uses, including corporate and professional offices, retail commercial, general offices, personal services, eating and drinking establishments, entertainment, major cultural facilities, commercial overnight accommodations, and mixed-use structures that integrate housing with commercial uses. Community, Neighborhood, Highway-Oriented, and General Commercial designations may restrict various uses and development

potential is typically lower than the Regional designation. Limited Commercial is the most restrictive designation. All commercial areas allow multi-family residential development.

- **Industrial.** Industrial land use designations in the City consist of Commercial Manufacturing, Hybrid, Limited, Light, and Heavy Industrial. Hybrid industrial areas allow for a mix of residential and clean, light industrial uses. Limited and Light Industrial designations are more restrictive to allow for greater compatibility with residential uses. Heavy industrial areas allow the widest range of industrial, machinery, and manufacturing uses, and do not permit any by-right residential uses.
- **Open Space.** Open space land use designations in the City include park and recreation facilities (e.g., bicycle trails, equestrian trails, walking trails, park land/lawn areas, child care facilities, and athletic fields), natural resource preserves (e.g., forest land, waterways, watersheds, agricultural lands, areas containing mineral deposits), ecological preserves and habitat protection sites, closed sanitary landfills sites, public water supply reservoir (uncovered), and water conservation areas such as percolation basins and floodplain areas.
- **Public Facilities.** Public facilities land use designations in the City include fire and police stations; public libraries; post offices and related government buildings and services; public health facilities, such as clinics and hospitals; and public elementary and secondary schools, among others.

The Community Plans are responsible for handling zoning changes that may occur in individual communities in the City. Community Plans that are soon to be updated include those in the Southwest Valley (Canoga Park – Winnetka – Woodland Hills – West Hills, Encino – Tarzana, and Reseda – West Van Nuys), Southeast Valley (North Hollywood – Valley Village, Sherman Oaks – Studio City – Toluca Lake – Cahuenga Pass, and Van Nuys – North Sherman Oaks), Harbor LA (Wilmington–Harbor City, Harbor Gateway), Planning the Westside (West Los Angeles, Venice, Palms – Mar Vista – Del Rey, and Westchester – Playa del Rey), Hollywood, Downtown Los Angeles, and Boyle Heights (Los Angeles City Planning Department 2021).

4.9.2 REGULATORY FRAMEWORK

The following describes the primary regulatory requirements regarding land use and planning. Applicable plans and regulatory documents/requirements include the following:

- California Government Code Section 65302
- Senate Bill (SB) 375
- Southern California Association of Governments (SCAG) 2020-2045 Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS)
- City of Los Angeles General Plan, including:

  - Framework Element
  - Transportation Element (Mobility Plan 2035)
  - Conservation Element
  - Housing Element
  - Health and Wellness Element (Plan for a Healthy Los Angeles)
  - Land Use Element (Community Plans)

- Los Angeles Municipal Code (LAMC)
- Redevelopment Plans
- Citywide Design Guidelines
- Plan Overlays, including:
  - Clean Up Green Up Ordinance
  - Historic Preservation Overlay Zones (HPOZ)
  - Pedestrian/Neighborhood Oriented Districts (POD/NOD)
  - River Improvement Overlay (RIO)
  - Specific Plans
- Industrial Land Use Policy
- Freeway Adjacent Advisory Notice for Sensitive Uses (ZI No. 2427)

State

California Government Code Section 65302

California law requires that every city and county prepare and adopt a long-range comprehensive General Plan to guide future development and to identify the community's environmental, social, and economic goals. As stated in Section 65302 of the California Government Code, "The general plan shall consist of a statement of development policies and shall include a diagram or diagrams and text setting forth objectives, principle, standard, and plan proposals." While a general plan will contain the community vision for future growth, California law also requires each plan to address the mandated elements listed in Section 65302. The mandatory elements for all jurisdictions are land use, circulation, housing, conservation, open space, noise, and safety.

Senate Bill (SB) 375

On September 30, 2008, Senate Bill (SB) 375 was instituted to help achieve Assembly Bill (AB) 32 goals through regulation of cars and light trucks. SB 375 aligns three policy areas of importance to local government: (1) regional long-range transportation plans and investments; (2) regional allocation of the

obligation for cities and counties to zone for housing; and (3) achievement of greenhouse gas (GHG) emission reduction targets for the transportation sector set forth in AB 32. It establishes a process for the California Air Resource Board (CARB) to develop GHG emission reduction targets for each region (as opposed to individual local governments or households). SB 375 also requires Metropolitan Planning Organizations (MPO) to prepare a Sustainable Communities Strategy (SCS) within the Regional Transportation Plan (RTP) that guides growth while taking into account the transportation, housing, environmental, and economic needs of the region. SB 375 uses California Environmental Quality Act (CEQA) streamlining as an incentive to encourage residential or mixed-use residential projects, which help achieve AB 32 goals to reduce GHG emissions.

Regional

Southern California Association of Governments (SCAG) 2020-2045 Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS)

On September 3, 2020, the SCAG Regional Council adopted the 2020-2045 RTP/SCS, also known as Connect SoCal. The 2020-2045 RTP/SCS presents a long-term transportation vision through the year 2045 for the six-county region of Imperial, Los Angeles, Orange, Riverside, San Bernardino, and Ventura counties. The 2020-2045 RTP/SCS contains baseline socioeconomic projections that are used as the basis for SCAG's transportation planning, and the provision of services by other regional agencies. SCAG's overarching strategy for achieving its goals is integrating land use and transportation. SCAG policies are directed towards the development of regional land use patterns that contribute to reductions in vehicle miles and improvements to the transportation system. Rooted in past RTP/SCS plans, Connect SoCal's "Core Vision" centers on maintaining and better managing the region's transportation network, expanding mobility choices by co-locating housing, jobs, and transit, and increasing investment in transit and complete streets. The plans "Key Connections" augment the "Core Vision" to address challenges related to the intensification of core planning strategies and increasingly aggressive greenhouse gas reduction goals, and include but are not limited to, Housing Supportive Infrastructure, Go Zones, and Shared Mobility. Connect SoCal intends to create benefits for the SCAG region by achieving regional goals for sustainability, transportation equity, improved public health and safety, and enhancement of the regions' overall quality of life. These benefits include but are not limited to a five percent reduction in vehicle miles traveled (VMT) per capita and vehicle hours traveled by nine percent, increase in work-related transit trips by two percent, create more than 264,500 new jobs, reduce greenfield development by 29 percent, and, building off of the 2016-2040 RTP/SCS, increase the share of new regional household growth occurring in High Quality Transit Areas (HQTA) by six percent and the share of new job growth in HQTAs by 15 percent.

Local

City of Los Angeles General Plan

The City of Los Angeles General Plan (General Plan), originally adopted in 1974, sets forth goals, objectives, policies, and programs to provide an official guide to the future development of the City, while integrating a range of state-mandated elements, including Land Use, Circulation (Mobility Plan 2035), Housing, Conservation, Open Space, Safety, Noise, and Air Quality. The City's General Plan also includes the Framework Element, the Health and Wellness Element (Plan for a Healthy Los Angeles), the Infrastructure Systems Element, and the Public Facilities & Services Element. Both the City's General Plan land use controls and the goals, objectives, and policies within individual elements of the General Plan include numerous provisions that are intended to avoid or reduce potential adverse effects on the environment. The elements that make up the City's General Plan are described in more detail below.

Framework Element

The City of Los Angeles General Plan Framework Element (General Plan Framework) establishes the conceptual basis for the City's General Plan. The General Plan Framework sets forth a Citywide comprehensive long-range growth strategy and establishes Citywide policies regarding land use, housing, urban form, neighborhood design, open space and conservation, economic development, transportation, infrastructure, and public services. The General Plan Framework provides guidelines for future updates of the City's community plans and does not supersede the more detailed community and specific plans.

- *Land Use Chapter.* The General Plan Framework Land Use Chapter designates Districts (i.e., Neighborhood Districts, Community Centers, Regional Centers, Downtown Center, and Mixed-Use Boulevards) that include standards and policies that shape the scale and intensity of proposed uses with the purpose of supporting the vitality of the City's residential neighborhoods and commercial districts. The establishment of the designated arrangement of land uses and development densities addresses an array of environmental issues, including, but not limited to: reductions in VMT, reductions in noise impacts, improved efficiency in the use of energy, improved efficiency and thus greater service levels within the infrastructure systems, availability of open space, compatibility of land uses, support for alternative modes of transportation, and provision of an attractive pedestrian environment.
- *Housing Chapter.* The overarching goal of the General Plan Framework Housing Chapter is to define the distribution of housing opportunities by type and cost for all residents of the City. The General Plan Framework Housing Chapter recognizes that the distribution of housing in proximity to transit can reduce vehicle trips and provide residents with the opportunity to walk between their home, job,

and/or neighborhood services. The Housing Chapter provides the following policies to achieve this goal through a number of measures:

- Concentrating opportunities for new development in the City's Neighborhood Districts and in Community Centers, Regional Centers, and the Downtown Center, as well as along primary transit corridors/boulevards;
- Providing development opportunities along boulevards located near existing or planned major transit facilities and areas characterized by low-intensity or marginally viable commercial uses with structures that integrate commercial, housing, and/or public service uses;
- Focusing mixed uses around urban transit stations, while protecting and preserving surrounding low-density neighborhoods from the encroachment of incompatible land uses unless properly transitioned; and
- Ensuring that affordable housing development is not concentrated in subregions within the City.

- *Urban Form and Neighborhood Design Chapter.* The General Plan Framework Urban Form and Neighborhood Design Chapter establishes the goal of creating a city that is attractive to future investment and a city of interconnected, diverse neighborhoods that builds on the strength of those neighborhoods and functions at both the neighborhood and Citywide scales. The purpose of the Urban Form and Neighborhood Design Chapter is two-fold: first, to support the population distribution principles of the General Plan Framework through proper massing and design of buildings and second, to enhance the physical character of neighborhoods and communities within the City. The General Plan Framework does not directly address the design of individual neighborhoods or communities but embodies general neighborhood design and implementation programs that guide local planning efforts and lay a foundation for community plan updates. The Urban Form and Neighborhood Design Chapter encourages growth in areas that have a sufficient base of both commercial and residential development to support transit service. The existing and planned transit system provides the opportunity to concentrate development and conserve the existing character of stable neighborhoods.
- *Open Space and Conservation Chapter*. The General Plan Framework Open Space and Conservation Chapter provides guidance for overall City provision of open space and sets forth policies for the protection of the City's natural environment resources. The Open Space and Conservation Chapter's objectives are oriented around the conservation of natural resources, provision of outdoor recreational opportunities, minimization of public risks from environmental hazards, and use of open space to enhance community and neighborhood character. Economic, social, and ecological imperative require the City to take full advantage of all existing open space elements. The ecological dimension is based on the improvement of water quality and supply, the reduction of flood hazards, improved air quality, and the provision of ecological corridors for birds and wildlife.

- *Economic Development Chapter.* The General Plan Framework Economic Development Chapter includes goals, policies and objectives that address the appropriate land use locations for development. The chapter also establishes mutual development objectives for land use and economic development. This Chapter set forth policies for the development of an infrastructure investment strategy to support population and employment growth areas. The Chapter also includes goals, objectives, and policies focused on preserving commercial uses within walking distance to residential areas, and promoting opportunities in areas where growth can be accommodated without encroaching on residential neighborhoods. It also focuses on establishing a balance of land uses that provide for commercial and industrial development which meet the needs of local residents, sustaining economic growth, and assuring maximum feasible environmental quality.
- *Transportation Chapter.* The General Plan Framework Transportation Chapter includes proposals for major improvements to enhance the movement of goods and to provide greater access to major intermodal facilities. While the focus of the Transportation Chapter is on guidance for transportation investments, the Transportation Chapter also includes goals, policies and objectives that overlap with policies included in other Framework chapters of the General Plan Framework regarding land use patterns and the relationship of the pedestrian system to arrangement of land uses. The Transportation Chapter of the General Plan Framework is implemented through the General Plan's Mobility Plan 2035, which is a comprehensive update of the General Plan Transportation Element.
- *Infrastructure and Public Services Chapter.* The General Plan Framework Infrastructure and Public Services Chapter addresses infrastructure and public service systems, including wastewater, stormwater, water supply, solid waste, police, fire, libraries, parks, power, schools, telecommunications, street lighting, and urban forests. For each of the public services and infrastructure systems, basic policies call for monitoring service demands and forecasting the future need for improvements, maintaining an adequate system/service to support the needs of population and employment growth, and implementing techniques that reduce demands on utility infrastructure or services. Generally, these techniques encompass a variety of conservation programs (e.g., reduced use of natural resources, increased site permeability, watershed management, and others). Strategic public investment is advocated in the Infrastructure and Public Services Chapter as a method to stimulate economic development as well as maintain environmental quality. Attention is also placed on the establishment of procedures for the maintenance and/or restoration of service after emergencies, including earthquakes.

Transportation Element (Mobility Plan 2035)

The Mobility Plan 2035, adopted on January 20, 2016, and readopted September 7, 2016, is a comprehensive update of the General Plan Transportation Element. The Mobility Plan 2035 provides the policy foundation

for achieving a transportation system that balances the needs of all road users, incorporates "complete streets" principles and lays the policy foundation for how future generations of Angelenos interact with their streets, in compliance with the Complete Streets Act (AB 1358).

The purpose of the Mobility Plan 2035 is to present a guide to the future development of a Citywide transportation system for the efficient movement of people and goods. While the Mobility Plan 2035 focuses on the City's transportation network, it complements other components of the General Plan that pertain to the arrangement of land uses to reduce VMT and policies to support the provision and use of alternative transportation modalities. The Mobility Plan 2035 includes the following five main goals that define the City's high-level mobility priorities

- Safety First;
- World Class Infrastructure;
- Access for All Angelenos;
- Collaboration, Communication, and Informed Choices; and
- Clean Environments and Healthy Communities.

Conservation Element

The City of Los Angeles General Plan includes a Conservation Element, which addresses the preservation, conservation, protection, and enhancement of the City's natural resources. Section 5 of the Conservation Element recognizes the City's responsibility for identifying and protecting its cultural and historical heritage. The Conservation Element establishes an objective to protect important cultural and historical sites and resources for historical, cultural, research, and community educational purposes and a corresponding policy to continue protecting historic and cultural sites and/or resources potentially affected by proposed land development, demolition, or property modification activities. The Conservation Element refers to the Open Space Element for a discussion of open space aspects of the City, including park sites.

Housing Element

The Housing Element of the General Plan is prepared pursuant to state law and provides planning guidance in meeting housing needs identified in the SCAG Regional Housing Needs Assessment (RHNA). The Housing Element identifies the City's housing conditions and needs, establishes the goals, objectives, and policies that are the foundation of the City's housing and growth strategy, and provides the array of programs the City intends to implement to create and preserve sustainable, mixed-income neighborhoods across the City. The Proposed Project is an update to the Housing Element.

Health and Wellness Element (Plan for a Healthy Los Angeles)

The Plan for a Healthy Los Angeles, the Health and Wellness Element of the City's General Plan, provides high-level policy vision, along with measurable objectives and implementation programs to elevate health as a priority for the City's future growth and development.[1] Through a new focus on public health from the perspective of the built environment and City services, the City seeks to achieve better health and social equity through its programs, policies, plans, budgeting, and community engagement. The plan acknowledges the relationship between public health and issues such as transportation, housing, environmental justice, and open space, among others. The plan includes the following goals:

- Los Angeles, A Leader in Health and Equity;
- A City Built for Health;
- Bountiful Parks and Open Spaces;
- Food that Nourishes the Body, Soul, and Environment;
- An Environment Where Life Thrives;
- Lifelong Opportunities for Learning and Prosperity; and
- Safe and Just Neighborhoods.

Included in this General Plan Element are policies pertaining to the arrangement of land uses within the City and building design procedures. As such, these policies address characteristics of the physical environment that contribute to public health. The Proposed Project includes a targeted update to the Plan for a Healthy Los Angeles to clarify that in addition to health, wellness and equity goals and policies, it is the General Plan element containing environmental justice goals and policies for the City, in compliance with SB 1000.

Land Use Element (Community Plans)

The Land Use Element of the City's General Plan is comprised of 35 community plans. Community plans are intended to provide an official guide for future development and propose approximate locations and dimensions for land use. The community plans establish standards and criteria for the development of housing, commercial uses, and industrial uses, as well as circulation and service systems. The community plans implement the City's General Plan Framework at the local level. The community plans consist of both text and an accompanying generalized land use map. The community plans' texts express goals, objectives, policies, and programs to address growth in the community. The community plans' maps depict the

[1] Plan for a Healthy Los Angeles, A Health and Wellness Element of the General Plan, March 2015, https://planning.lacity.org/odocument/7f065983-ff10-4e76-81e5-e166c9b78a9e/Plan_for_a_Healthy_Los_Angeles.pdf. Accessed April 2021.

desired arrangement of land uses as well as street classifications and the locations and characteristics of public service facilities. Per State law, each community plan must be consistent with the other elements and components of the General Plan and, thus, incorporates information from these plans. Each community plan includes residential, commercial, and industrial objectives and policies that establish a development concept for its neighborhoods and districts.

Community Plan Updates

The Department of City Planning is in the process of drafting updates to the 35 community pans, which provide a collective vision for each Community Plan Area (CPA). Once adopted, Community Plan Updates will supersede the existing community plan for the respective CPA. Until updates are adopted, existing community plans continue to represent the applicable land use element of the City's General Plan, including for purposes of a project's impact analysis.

Los Angeles Municipal Code (LAMC)

All development activity in the City is subject to the LAMC, particularly Chapter 1, General Provisions and Zoning, also known as the City of Los Angeles Planning and Zoning Code. The LAMC defines the range of zoning classifications throughout the City, provides the specific permitted uses applicable to each zoning designation, and applies development regulations to each zoning designation.

The LAMC is currently undergoing a comprehensive update to all Zoning Code sections as part of the re:code LA effort, which is being implemented alongside the Community Plan Updates. Re:code LA will update the Zoning Code to make the Code more streamlined, visual, and easy to use. The existing Zoning Code regulations are not being repealed as part of the re:code LA effort. The existing Zoning Code will continue to be located in Chapter 1 of the LAMC, while the New Zoning Code will be located in a new Chapter 1A of the LAMC.

Redevelopment Plans

Redevelopment Plans outline a community vision and revitalization opportunities within specific neighborhoods across the City. Each Redevelopment Project Area has a unique set of land use restrictions designed specifically to enhance the quality of life for the community.

Citywide Design Guidelines

The Citywide Design Guidelines serve to implement the General Plan Framework Element's urban design principles and are intended to be used by City of Los Angeles Department of City Planning staff, developers, architects, engineers, and community members in evaluating project applications, along with relevant policies from the Framework Element and Community Plans. By offering more direction for

proceeding with the design of a project, the Citywide Design Guidelines illustrate options, solutions, and techniques to achieve the goal of excellence in new design. The Citywide Design Guidelines, which were initially adopted by the City Planning Commission in July 2013 and updated in October 2019, are intended as performance goals and not zoning regulations or development standards and, therefore, do not supersede regulations in the LAMC. The guidelines "carry out the common design objectives that maintain neighborhood form and character while promoting quality design and creative infill development solutions" and are organized in relation to Pedestrian-First Design, 360 Degree Design, and Climate-Adapted Design. The Citywide Design Guidelines incorporate the goals of the previous Walkability Checklist and interact with other guidelines such as those found in Community Design Overlays.

Plan Overlays

An overlay is an additional layer of planning control applied to properties in a clearly defined geographic area. Overlays function as tailored zoning districts, each with its own specialized set of regulations. Overlays implement the City's General Plan and Community Plans through neighborhood-specific policy objectives, supplementing the underlying base zoning. Projects located in an overlay must demonstrate compliance with all applicable regulations.

- *Clean Up Green Up Ordinance.* As part of its Clean UP Green UP campaign, the City Council adopted Ordinance 184,245 (effective June 2016) adding Sections 95.314.3 and 99.04.504.6 to the LAMC and amending Section 99.05.504.5.3 of the LAMC to implement building standards and requirements to address cumulative health impacts resulting from incompatible land use patterns within the City. Section 99.04.504.6 of the LAMC requires mechanically ventilated buildings within 1,000 feet of a freeway to provide regularly occupied areas of the building with air filtration media for outside and return that provides a Minimum Efficiency Reporting Value (MERV) of 13
- *Historic Preservation Overlay Zones (HPOZ).* In order to protect neighborhoods with distinct architectural and cultural resources, the City created Historic Preservation Overlay Zones (HPOZs) to govern the review of project applications. These regulations address exterior alterations or additions to historic properties within designated districts.
- *Pedestrian/Neighborhood Oriented Districts (POD/NOD).* In Pedestrian or Neighborhood Oriented Districts (POD/NOD), a variety of commercial uses and activities are located along major streets that have a majority of structures with similar size and similar architectural features, such as the location of windows, building walls, and pedestrian entrances. Regulations in these corridors preserve and enhance form, encouraging people in the surrounding neighborhoods to walk and shop along them.
- *River Improvement Overlay (RIO).* Effectuated by Ordinance No. 183,145 in August 2014, the River Improvement Overlay (RIO) District enables the City of Los Angeles to better coordinate land use

development along the 32-mile corridor of the Los Angeles River that flows within the City's boundaries. The RIO District is a proposed special use district that requires new development projects to follow and implement applicable development regulations and design guidelines. The purposes of the RIO District are to support the goals of the Los Angeles River Revitalization Master Plan (LARRMP); contribute to the environmental and ecological health of the City's watersheds; provide native habitat and support local species; establish a positive interface between the Los Angeles River and adjacent properties; promote pedestrian, bicycle and other multi-modal connections between the river and surrounding neighborhoods; provide an aesthetically pleasing environment; provide safe, convenient access to and along the river; promote river identity; and support the City's stormwater ordinances and programs.

- *Specific Plans (SP).* A specific plan is a district where special zoning stipulates the types of development permitted within a zoning district. Aligned with the goals of the General Plan and community plans, specific plans include development regulations for applicants to follow.

Industrial Land Use Policy Project

In January 2008, the Department of City Planning and the Community Redevelopment Agency of Los Angeles (CRA/LA) presented the findings of the Industrial Land Use Policy (ILUP) Project to the City Planning Commission. The ILUP Project was a two-year study that gathered and analyzed information regarding the viability of the City's industrial districts, particularly those areas experiencing pressure to be converted to residential uses. The result of the two-year effort underscored the appropriateness of the current policy adopted by the City Council and Mayor and contained in the General Plan Framework and elsewhere in adopted documents and made no change to any policy. The ILUP Project does not establish new land use plans or policies and was never formally presented to the City Council for consideration or adoption. Since the ILUP was never formally adopted by the City Council, the City considers zone changes and General Amendments from industrial designations on a case-by-case basis, as it has historically done.

Freeway Adjacent Advisory Notice for Sensitive Users (ZI No. 2427)

Zoning Information File 2427 (ZI No. 2427) provides design and siting guidelines for discretionary residential projects and sensitive uses (i.e., schools, day care centers, and senior care centers) located within 1,000 feet of a freeway. ZI No. 2427 requires all projects seeking discretionary approval for which findings must be made regarding conformance to the General Plan to adhere to the Citywide Design Guidelines, including those that address freeway proximity.

4.9.3 ENVIRONMENTAL IMPACTS

Thresholds of Significance

The following threshold of significance was developed based on Appendix G of the CEQA Guidelines. The Housing Element Update would have a significant impact related to land use and planning if it would:

- **Threshold 4.9-1:** Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect.

Methodology

The discussion of a significant impact with regard to conflicts with an applicable land use plan, policy, or regulation serves two purposes: identifying significant impacts related to land use and compliance with CEQA Guidelines Section 15125(d), which requires that an EIR include a discussion of any inconsistencies with applicable plans. A conflict between a project and an applicable plan is not necessarily a significant environmental impact under CEQA unless the inconsistency would result in an adverse physical change to the environment (per CEQA Guidelines Section 15382). An excerpt from the legal practice guide CEB, Practice under the California Environmental Quality Act, Section 12.34 illustrates this point:

- …if a project affects a river corridor, one standard for determining whether the impact is significant might be whether the project violates plan policies protecting the corridor; the environmental impact, however, is the physical impact on the corridor.

Under State Planning and Zoning law (Government Code Section 65000, et seq.) strict conformity with all aspects of a plan is not required. Generally, plans reflect a range of competing interests and agencies are given great deference to determine consistency with their own plans. A Proposed Project should be considered consistent with a general plan or elements of a general plan if it furthers one or more policies and does not obstruct other policies (Governor's Office of Planning and Research 2017). Generally, given that land use plans reflect a range of competing interests, a project should be compatible with a plan's overall goals and objectives, but need not be in perfect conformity with every plan policy.

This section focuses on direct land use impacts related to an inconsistency with a policy adopted for purposes of mitigating an environmental effect. The Housing Element Update for the City of Los Angeles would need to be consistent with other General Plan elements. In addition, Los Angeles is a member of SCAG and is subject to strategies established for the region in the 2020-2045 RTP/SCS. Therefore, the

Housing Element Update is evaluated in this section of the EIR by comparing the Proposed Project to applicable policies and strategies contained in the City's General Plan and SCAG's 2020-2045 RTP/SCS. Furthermore, the project's consistency with the Southern California Air Quality Management District (SCAQMD) Air Quality Management Plan (AQMP) is discussed in Section 4.2, *Air Quality*.

Project Impacts and Mitigation Measures

Threshold 4.9-1	Would the Housing Element Update **c**ause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect?

Impact 4.9-1 The Housing Element Update would be consistent with all applicable land use policies, goals, strategies, and/or objectives contained in the City of Los Angeles General Plan and SCAG's 2020-2040 RTP/SCS. This impact would be ***less than significant***.

The Housing Element Update would apply to the entire geographic area located within the boundaries of the City, which encompasses 467 square miles. Although the precise locations of rezone sites in the City have not yet been determined, this analysis anticipates that rezoning, in general, will be focused in areas identified for growth in the Framework Element as well as in High and Very High Resource areas, and would include upzoning existing lower density residential zones in order to accommodate the necessary housing growth. The types of housing units anticipated under the Housing Element Update would generally fall into five categories of development projects – multi-family residential development; single-family residential development; accessory dwelling units (ADU); mixed use development; and conversion and/or rehabilitation of existing nonresidential, residential and mixed-use structures to be used for housing. The Housing Element Update also includes updates to the Goals, Objectives, Policies and Programs of the Housing Element.

A potential indirect impact that may result from the implementation of the Housing Element Update is "gentrification" in various areas of the City. Gentrification is not an environmental issue but rather a socio-economic issue in which places of lower real estate value are transformed into places of higher real estate value during the process of neighborhood change (US EPA 2021). Gentrification has become an increasingly common occurrence in recent years due to the growing popularity of urban centers and existing communities (US EPA 2021). Due to the reasonably foreseeable development under the Housing Element Update and associated zoning changes to accommodate these developments, including in urban centers and existing communities, it is likely that lower real estate value housing units and associated residents will be displaced by housing units of higher real estate value. However, there are expected

potential benefits of the Housing Element Update including a substantial increase in the City's housing stock, which would increase vacancy rates and may result in a lower housing cost, and any housing units displaced by development under the Housing Element Update would be offset by the overall net increase in housing and affordable housing. In addition, the Housing Element Update incorporates Goals, Objectives, Policies and Programs which are designed to minimize displacement and provide for greater tenant protections. It would be speculative to attempt to identify which units and people, or how many units and people might be displaced due to gentrification.

This analysis focuses on direct land use impacts related to an inconsistency with a policy adopted for purposes of mitigating an environmental effect and is therefore based on consistency analyses with these policies rather than impacts from individual development types (i.e., multi-family, single-family, ADU, mixed-use, and rehabilitation developments). Although an analysis of environmental impacts related to the types of housing development anticipated under the Housing Element Update is included in other sections of the EIR, a similar analysis is not warranted in this section.

In addition to analyzing the threshold question above, which is intended to focus on whether environmental impacts will result from the Proposed Project conflicting with applicable plans, policies or regulations, the following evaluation is also intended to satisfy the requirements of Guidelines Section 15125(d) to identify any inconsistencies between the project and the applicable general, specific or regional plans. Pursuant to State Planning Law, the programs included in the Housing Element Update would need to be consistent with those included in other elements of the General Plan. All goals, objectives, and policies of the associated with the Housing Element Update are intended to further citywide housing priorities established by the Housing Element Update, which include addressing the housing shortage, advancing racial equity and access to opportunity, preventing displacement, and promoting sustainability, resilience and Environmental Justice through housing. While the full list of goals, objective, and policies are included in Chapter 6 of the Housing Element Update,[2] Table 4.9-1 below lists those associated with land use and planning.

[2] The Draft Housing Element Update may be accessed on the Department of City Planning website, at *https://planning.lacity.org/plans-policies/housing-element-update#draft-plan*

Table 4.9-1 Housing Element Goals, Objectives, and Policies Related to Land Use and Planning

GOAL 1: A City where housing production results in an ample supply of housing to create more equitable and affordable options that meet existing and projected needs.
Objective 1.1. Forecast and plan for existing and projected housing needs over time with the intention of furthering Citywide Housing Priorities.
Policy 1.1.2. Plan for appropriate land use designations and density to accommodate an ample supply of housing units by type, cost, and size within the City to meet housing needs, according to Citywide Housing Priorities and the City's General Plan. **Policy 1.1.3.** Account for existing housing needs when planning for future development by conducting analysis to develop and incorporate a buffer above household projections. **Policy 1.1.6.** Allocate citywide housing targets across Community Plan areas in a way that seeks to address patterns of racial and economic segregation, promote jobs/housing balance, provide ample housing opportunities, and affirmatively further fair housing. **Policy 1.1.7.** Incentivize production of mixed income and 100% Affordable Housing projects by rezoning for more inclusive development at densities that enable their construction in every geography. **Policy 1.1.9.** Develop and integrate anti-displacement strategies that further Citywide Housing Priorities into land use and planning strategies.
Objective 1.2. Facilitate the production of housing, especially projects that include Affordable Housing and/or meet Citywide Housing Priorities.
Policy 1.2.6. Create new citywide and local land use incentives and programs that maximize the net gain of affordable housing and produce housing that meets Citywide Housing Priorities. Explore varied affordability ratios, the feasibility of inclusionary zoning requirements, and a greater mix of income based on market areas. **Policy 1.2.8.** Develop and implement new land use and financing tools to promote more housing that is affordable to those with the lowest incomes and for longer periods of time. **Policy 1.2.9..** Allow for zoning flexibility for Affordable housing at the project review and planning level when broader Citywide Priorities are being advanced.
Objective 1.3. Promote a more equitable distribution of affordable housing opportunities throughout the city, with a focus on increasing Affordable Housing in Higher Opportunity Areas and in ways that further Citywide Housing Priorities.
Policy 1.3.2. Prioritize the development of new Affordable Housing in all communities, particularly those that currently have fewer Affordable units. **Policy 1.3.3.** Provide accessible and inclusive outreach and education to community members on the history of racist policies, planning, zoning and real estate practices and how they are reflected in today's land use patterns and socio-economic disparities.

Goal 3: A City in which housing helps to create healthy, livable, sustainable, and resilient communities that improve the lives of all Angelenos.
Objective 3.2. Promote environmentally sustainable buildings and land use patterns that support a mix of uses, housing for various income levels, and provide access to jobs, amenities, services, and transportation options.
Policy 3.2.1. Promote the integration of housing with other compatible land uses at both the building and neighborhood level. **Policy 3.2.2.** Promote new multi-family housing, particularly Affordable and mixed income housing, in areas near transit, jobs and Higher Opportunity Areas, in order to facilitate a better jobs-housing balance, help shorten commutes, and reduce greenhouse gas emissions. **Policy 3.2.7.** Provide environmentally sustainable development standards and incorporate sustainable best practice in building and zoning code updates. **Policy 3.2.9.** Consider accommodating new residential uses, including live/work and mixed-use, in less-productive industrial, office, and commercial areas when the site can accommodate housing in keeping with citywide industrial land, jobs-housing and jobs preservation priorities.
Goal 4. A City that fosters racially and socially inclusive neighborhoods and corrects the harms of historic racial, ethnic, and social discrimination of the past and present.
Objective 4.3. Affirmatively further fair housing in all housing and land use programs by taking proactive measures to promote diverse, inclusive communities that grant all Angelenos access to housing, particularly in Higher Opportunity Areas, increase place-based strategies to encourage community revitalization and protect existing residents from displacement.
Policy 4.3.3. Examine land use practices that perpetuate racial exclusion and inequities including but not limited to: single family / low density zoning, minimum lot size requirements, location of noxious uses, and subjective design review standards. Introduce context specific reforms that further Citywide Housing Priorities.

Table 4.9-2 provides a consistency analysis of the Housing Element Update with applicable policies contained in the General Plan that were adopted for the purpose of minimizing any environmental effect. General Plan policies related to topics not considered under CEQA, such as economic policies, are not included. As demonstrated in Table 4.9-2, the Housing Element Update would generally be consistent with policies contained in the City's General Plan.

Table 4.9-2 Consistency Analysis of the Housing Element Update with the City of Los Angeles General Plan

General Plan Framework Element (1995, 1996, 2001)	
Chapter 3. Land Use	
Objective 3.2 Provide for the spatial distribution of development that promotes an improved quality of life by facilitating a reduction of vehicular trips, vehicle miles traveled, and air pollution.	Consistent The Housing Element Update aims to promote mixed-use neighborhoods throughout the City, particularly in areas near existing transit. Specifically, Objective 3.2 of the Housing Element Update aims to promote land use patterns that support a mix of uses, housing for various income levels, and provide access to jobs, amenities, services, and transportation options. An increase in mixed-use neighborhoods near transit would generally reduce the number of vehicular trips and VMT, and thus reduce air pollution from greenhouse gas emissions. See Section 4.2, *Air Quality*, and Section 4.14, *Transportation*, for the projects impacts related to air quality emissions and VMT.
Objective 3.7 Provide for the stability and enhancement of multi-family residential neighborhoods and allow for growth in areas where there is sufficient public infrastructure and services and the residents' quality of life can be maintained or improved.	Consistent The Housing Element Update would accommodate housing in High and Very High Resource areas (e.g., areas with good access to jobs, services, and high-quality public transit) and throughout the City to provide for the stability and enhancement of existing multi-family residential neighborhoods. As discussed in Section 4.11, *Population and Housing*, the Housing Element Update would accommodate forecasted growth and existing need for housing and would not induce unplanned growth. As discussed in Section 4.12, *Public Services,* and Section 4.16, *Utilities and Service Systems*, areas where new housing is anticipated would be served by sufficient public infrastructure and services.
Objective 3.8 Reinforce existing and establish new neighborhood districts which accommodate a broad range of uses that serve the needs of adjacent residents, promote neighborhood activity, are compatible with adjacent neighborhoods, and are developed as desirable places to work and visit.	Consistent The Housing Element Update includes goals, objectives, and policies that aim to create sustainable, mixed-use, mixed-income neighborhoods throughout the City. These goals aim to provide opportunities for housing, jobs, transit, and basic amenities for all segments of the population. In addition, the Housing Element Update would facilitate the production of equitable affordable housing and housing that meet underserved needs, such as those of the homeless population (i.e., Objectives 1.2, 1.3 and 4.3) Therefore, the Housing Element Update would further promote fair housing, prevent displacement, promote housing stability, and promote homeless prevention and diversion. Furthermore, Objective 3.2 of the Housing Element Update aims to promote land use patterns that support a mix of uses, housing for various income levels, and provide access to jobs, amenities, services, and transportation options.

General Plan Framework Element (1995, 1996, 2001)	
Objective 3.15 Focus mixed commercial/residential uses, neighborhood-oriented retail, employment opportunities, and civic and quasi-public uses around urban transit stations, while protecting and preserving surrounding low-density neighborhoods from the encroachment of incompatible land uses.	Consistent The Housing Element Update focuses on increasing the availability of mixed-use neighborhoods (such as through the Rezoning Program) with access to jobs, services, and high-quality public transit. Furthermore, any housing that would occur in low-density neighborhoods (i.e., ADUs, single-family, low scale multi-family, and rehabilitation projects) would be compatible with surrounding residential development. In addition, Policy 3.2.1. under Objective 3.2. of the Housing Element Update aims to promote the integration of housing with other compatible land uses at both the building and neighborhood level.
Objective 3.18 Provide for the stability and enhancement of multi-family residential, mixed-use, and/or commercial areas of the City and direct growth to areas where sufficient public infrastructure and services exist.	Consistent See responses to Objectives 3.7, 3.8, and 3.15.
Chapter 4. Housing	
Objective 4.1 Plan the capacity for and develop incentives to encourage production of an adequate supply of housing units of various types within each City subregion to meet the projected housing needs by income level of the future population to the year 2010.	Consistent The Housing Element Update would allow for the development of additional residences throughout the City. As shown in Table 4.9-1, the Housing Element Update contains policies that affirmatively further fair housing, prevent displacement, and promote homelessness prevention. Altogether, these policies would ensure that a variety of housing types are provided. As discussed in Section 4.11, *Population and Housing*, development throughout the City would meet projected housing needs of the future population.
Objective 4.2 Encourage the location of new multi-family housing development to occur in proximity to transit stations, along some transit corridors, and within some high activity areas with adequate transitions and buffers between higher-density developments and surrounding lower-density residential neighborhoods.	Consistent The Housing Element Update would promote concentrated housing growth in High and Very High Resource areas and in areas with good access to jobs, services, and high-quality public transit. Specifically, Objective 3.2 of the Housing Element Update aims to promote land use patterns that support a mix of uses, housing for various income levels, and provide access to jobs, amenities, services, and transportation options. Furthermore, Policy 3.2.1. under Objective 3.2 aims to promote the integration of housing with other compatible land uses at both the building and neighborhood level.
Objective 4.3 Conserve scale and character of residential neighborhoods.	Consistent The Housing Element Update would not involve the construction of new roads, freeways, railways, or other barriers that may physically divide established communities in the City. Furthermore, the Housing Element Update would not result in a major land use or zoning change that would introduce radically different uses to any established communities. Rezoning would primarily occur in High and Very High Resource Areas, which are generally located near or in high quality transit areas, and any housing that would occur in low-density neighborhoods (i.e., ADUs, single-family, low scale

General Plan Framework Element (1995, 1996, 2001)	
	multi-family, and rehabilitation projects) would be compatible with the character and scale of surrounding residential development. Furthermore, Policy 3.2.1 under Objective 3.2 of the Housing Element Update aims to promote the integration of housing with other compatible land uses at both the building and neighborhood level.
Objective 4.4 Reduce regulatory and procedural barriers to increase housing production and capacity in appropriate locations.	Consistent See response to Objective 4.1.
Chapter 5. Urban Form and Neighborhood Design	
Objective 5.2 Encourage future development in centers and in nodes along corridors that are served by transit and are already functioning as centers for the surrounding neighborhoods, the community or the region.	Consistent The Housing Element Update includes objectives, policies and implementation programs that would create sustainable mixed-use, mixed-income neighborhoods across the City and provide opportunities for housing located near jobs, transit, and basic amenities for all segments of the population. Specifically, Objective 3.2 of the Housing Element Update aims to promote land use patterns that support a mix of uses, housing for various income levels, and provide access to jobs, amenities, services, and transportation options.
Objective 5.8 Reinforce or encourage the establishment of a strong pedestrian orientation in designated neighborhood districts, community centers, and pedestrian-oriented subareas within regional centers, so that these districts and centers can serve as a focus of activity for the surrounding community and a focus for investment in the community.	Consistent See response to Objective 5.2.
Chapter 9. Infrastructure and Public Services	
Objective 9.5 Ensure that all properties are protected from flood hazards in accordance with applicable standards and that existing drainage systems are adequately maintained.	Consistent Reasonably foreseeable development under the Housing Element Update would not occur in flood hazard areas, as discussed in Section 4.9, *Hydrology and Water Quality.*
Objective 9.6 Pursue effective and efficient approaches to reducing stormwater runoff and protecting water quality.	Consistent Proposed Housing Element Update policies, in combination with federal, state, and local requirements pertaining to stormwater runoff control, would reduce stormwater runoff and protect water quality. See Section 4.9, *Hydrology and Water Quality*, for a more detailed discussion.

General Plan Framework Element (1995, 1996, 2001)	
Objective 9.7 Continue to develop and implement a management practices-based stormwater program which maintains and improves water quality.	Consistent Reasonably foreseeable development under the Housing Element Update would be required to comply with National Pollutant Discharge Elimination System (NPDES) permit requirements and the City's stormwater requirements. See Section 4.9, *Hydrology and Water Quality*, for a more detailed discussion.
Objective 9.9 Manage and expand the City's water resources, storage facilities, and water lines to accommodate projected population increases and new or expanded industries and businesses.	Consistent Reasonably foreseeable development under the proposed Housing Element Update would not cause a significant impact to groundwater, as discussed in Section 4.9, *Hydrology and Water Quality*. Section 4.16, *Utilities and Service Systems*, details LADWP's plans to replace and repair aging water infrastructure, thereby expanding the City's water resources and continuing to meet future demand generated by reasonably foreseeable development under the Housing Element Update.
Objective 9.10 Ensure that water supply, storage, and delivery systems are adequate to support planned development.	Consistent See the response to Objective 9.9.
Objective 9.40 Ensure efficient and effective energy management in providing appropriate levels of lighting for private outdoor lighting for private streets, parking areas, pedestrian areas, security lighting, and other forms of outdoor lighting and minimize or eliminate the adverse impact of lighting due to light pollution, light trespass, and glare.	Consistent Reasonably foreseeable development would be required to comply with energy efficiency lighting and light pollution reduction requirements included in the 2016 California Building Code, including the CALGreen Code, and the Los Angeles Building Code and Los Angeles Green Building Code (LAMC Chapter IX); the Los Angeles Building Code and Green Building Code largely incorporate and amend the 2013 California Building Code and CALGreen Code, respectively, For example, Subsection 99.05.106.8 of the Los Angeles Green Building Code sets restrictions on residential outdoor lighting, and Section 99.04.211.4 requires residences to be constructed with solar-ready features as specified in the California Energy Code. Furthermore, Policy 3.2.7 under Objective 3.2 of the Housing Element Update aims to provide environmentally sustainable development standards and incorporate sustainable best practices in building and zoning code updates. Light and glare impacts would be less than significant, as discussed in Section 4.1, *Aesthetics*.

General Plan Framework Element (1995, 1996, 2001)	
Plan for a Healthy Los Angeles: Health and Wellness Element (2015)	
Policy 5.1 Air pollution and respiratory health Reduce air pollution from stationary and mobile sources; protect human health and welfare and promote improved respiratory health.	Consistent The Housing Element Update supports reduced air pollution from mobile sources and improved respiratory health by supporting development of multi-use neighborhoods and reducing vehicle trips and greenhouse gas emissions by promoting development near areas with access to public transit. In addition, stationary and mobile sources throughout the City would be subject to local, state, and national regulations to reduce air pollutant emissions, including California's clean car standards (i.e., Pavley regulations), ARB diesel engine requirements, and SCAQMD rules and regulations.
Policy 5.7 Land use planning for public health and GHG emission reduction Promote land use policies that reduce per capita greenhouse gas emissions, result in improved air quality and decreased air pollution, especially for children, seniors, and others susceptible to respiratory diseases.	Consistent See response to Policy 5.1.
Air Quality Element (1992)	
Policy 1.1 Reduce air pollutants consistent with the Regional Air Quality Management Plan (AQMP), increase traffic mobility, and sustain economic growth citywide.	Consistent The Housing Element Update supports reduced air pollution from mobile sources and improved respiratory health by supporting development of multi-use neighborhoods and reducing vehicle trips and greenhouse gas emissions by promoting development near areas with access to public transit. Specifically, Objective 3.2 of the Housing Element Update aims to promote land use patterns that support a mix of uses, housing for various income levels, and provide access to jobs, amenities, services, and transportation options.
Policy 2.1 Reduce work trips as a step towards attaining trip reduction objectives necessary to achieve regional air quality goals	Consistent The Housing Element Update would reduce work trips and VMT by promoting development in areas with good access to jobs, services, and high-quality public transit. In addition, development of mixed-use neighborhoods would serve to reduce worker trips for those who live and work within those communities. See Section 4.14, *Transportation*, for the Project's impacts related to VMT.
Policy 3.1 Increase the portion of work trips made by transit to levels that are consistent with the goals of the AQMP and Congestion Management Plan (CMP).	Consistent See the response to Policy 2.1.

General Plan Framework Element (1995, 1996, 2001)	
Policy 3.2 Reduce vehicular traffic during peak periods.	Consistent The Housing Element Update would accommodate housing development which could result in an increase in peak period traffic volumes, particularly along major arterials citywide. However, due to the focus on placement of housing development in areas near high-quality public transit, per capita traffic would decline with implementation of the Housing Element Update. Nonetheless, no significant impacts related to traffic would occur, as discussed in Section 4.14, *Transportation*.
Policy 4.2 Reduce vehicle trips and vehicle miles traveled associated with land use patterns.	Consistent See the response to Policy 2.1.
Policy 4.3 Ensure that land use plans separate major sources of air pollution from sensitive receptors, such as schools, hospitals and parks.	Consistent Reasonably foreseeable development under the Housing Element Update would include housing development that would not be a major source of air pollution. Existing design standards imposed on development would further address compatibility issues. Furthermore, Policy 3.2.1. under Objective 3.2. of the Housing Element Update aims to promote the integration of housing with other compatible land uses at both the building and neighborhood level.
Conservation Element (2001)	
Archaeological and paleontological Protect the city's archaeological and paleontological resources for historical, cultural, research and/or educational purposes.	Consistent As discussed in Section 4.4, *Cultural Resources*, and Section 4.5, *Geology and Soils*, the Housing Element Update would result in significant and unavoidable impacts to historic, archaeological, and paleontological resources. Nonetheless, implementation of identified mitigation measures in Section 4.4, *Cultural Resources*, and Section 4.5, *Geology and Soils*, for these resources would minimize the potential for impacts associated with growth under the Housing Element Update.
Housing Element (2013)	
Policy 2.2 Promote sustainable neighborhoods that have mixed-income housing, jobs, amenities, services and transit.	Consistent The Housing Element Update would create sustainable mixed-use, mixed-income neighborhoods across the City and provide opportunities for housing, jobs, transit, and basic amenities for all segments of the population. This would be done by promoting fair housing, preventing displacement and promoting housing stability, and promoting homeless prevention and diversion. Specifically, Objective 3.2 of the Housing Element Update aims to promote land use patterns that support a mix of uses, housing for various income levels, and provide access to jobs, amenities, services, and transportation options. Furthermore, Policy 3.2.1. under Objective 3.2. of the Housing Element Update aims to promote the integration of housing with other compatible land uses at both the building and neighborhood level. In addition, see the responses to Framework Element Policy 3.8.

General Plan Framework Element (1995, 1996, 2001)	
Policy 2.4 Promote livable neighborhoods with a mix of housing types, quality design and a scale and character that respects unique residential neighborhoods in the City.	Consistent See the responses to Framework Element Policy 3.8, and response to Housing Element Policy 2.2.
Noise Element (1999)	
Policy 3 Reduce or eliminate noise impacts associated with proposed development of land and changes in land use.	Consistent Reasonably foreseeable development throughout the City would be required to minimize noise impacts in accordance with the City's Noise Ordinance and incorporate mitigation provided in Section 4.10, *Noise*, as applicable.
Mobility Element – Mobility Plan 2035 (2016)	
Chapter 3: Access for All Angelenos	
Policy 3.1 Access for All Recognize all modes of travel, including pedestrian, bicycle, transit, and vehicular modes - including goods movement - as integral components of the City's transportation system.	Consistent The Housing Element Update would support transit-oriented development due to the emphasis on increasing mixed-use neighborhoods throughout the City and emphasis on building in High and Very High Resource Areas, which are typically located near or within high quality transit areas with existing infrastructure for pedestrians and bicyclists.
Policy 3.3 Land Use Access and Mix Promote equitable land use decisions that result in fewer vehicle trips by providing greater proximity and access to jobs, destinations, and other neighborhood services.	Consistent The proposed Housing Element Update would include goals, policies, objectives and programs that would result in reduced vehicle trips. Specifically, Objective 3.2 of the Housing Element Update aims to promote land use patterns that support a mix of uses, housing for various income levels, and provide access to jobs, amenities, services, and transportation options. See Section 4.14, *Transportation*, for the Project's impacts related to VMT.
Chapter 5: Clean Environments & Healthy Communities	
Policy 5.2 Vehicle Miles Traveled (VMT) Support ways to reduce vehicle miles traveled (VMT) per capita.	Consistent The Housing Element Update includes goals, policies, objectives and programs that would result in reduced vehicle trips. Reasonably anticipated development from the Housing Element Update would include a mix of uses that support the use of alternative transportation modes, such as transit, walking, and bicycling. See Section 4.14, *Transportation*, for the projects impacts related to VMT.

The 2020-2045 RTP/SCS also includes implementation strategies for focusing growth near destinations and mobility options, promoting diverse housing choices, leveraging technology innovations, supporting implementation of sustainability policies, and promoting a green region. These strategies are intended to be supportive of implementing the regional SCS. Table 4.9-3 evaluates the project's consistency with the strategies of the SCAG 2020-2045 RTP/SCS. As demonstrated in Table 4.9-3, the Housing Element Update would generally be consistent with strategies in SCAG's 2020-2045 RTP/SCS.

Table 4.9-3 Consistency Analysis of the Housing Element Update with the SCAG 2020-2045 RTP/SCS

SCAG 2020-2045 RTP/SCS Strategy	Housing Element Update Consistency
Focus Growth Near Destinations and Mobility Options • Emphasize land use patterns that facilitate multimodal access to work, educational and other destinations • Focus on a regional jobs/housing balance to reduce commute times and distances and expand job opportunities near transit and along center-focused main streets • Plan for growth near transit investments and support implementation of first/last mile strategies. • Promote the redevelopment of underperforming retail developments and other outmoded nonresidential uses • Prioritize infill and redevelopment of underutilized land to accommodate new growth, increase amenities and connectivity in existing neighborhoods. • Encourage design and transportation options that reduce the reliance on and number of solo car trips (this could include mixed uses or locating and orienting close to existing destinations) • Identify ways to "right size" parking requirements and promote alternative parking strategies (e.g., shared parking or smart parking)	Consistent The Housing Element Update aims to promote mixed-use neighborhoods throughout the City, particularly in areas near existing and planned transit. Specifically, Objective 3.2 of the Housing Element Update aims to promote land use patterns that support a mix of uses, housing for various income levels, and provide access to jobs, amenities, services, and transportation options. An increase in mixed-use neighborhoods near transit would generally reduce the number of vehicular trips and VMT, and thus reduce air pollution from greenhouse gas emissions. See Section 4.2, *Air Quality*, and Section 4.14, *Transportation*, for the Project's impacts related to air quality emissions and VMT.
Promote Diverse Housing Choices • Preserve and rehabilitate affordable housing and prevent displacement • Identify funding opportunities for new workforce and affordable housing development • Create incentives and reduce regulatory barriers for building context-sensitive accessory dwelling units to increase housing supply • Provide support to local jurisdictions to streamline and lessen barriers to housing development that supports reduction of greenhouse gas emissions	Consistent The Housing Element Update would reduce barriers to the production of equitable affordable housing and housing that meet underserved needs, such as those of the homeless population (i.e., Objectives 1.2 and 1.3). The Housing Element Update also includes a set of goals and objectives related to minimizing displacement of affordable housing tenants (see Goal 2 and Objectives 2.1 and 2.2). Therefore, the Housing Element Update would further promote fair housing, prevent displacement, promote housing stability, and promote homeless prevention and diversion. Furthermore, by focusing on development of multi-use neighborhoods near high-quality public transit, the Housing Element Update also promotes the reduction in vehicle trips and greenhouse gas emissions.

SCAG 2020-2045 RTP/SCS Strategy	Housing Element Update Consistency
Leverage Technology Innovations • Promote low emission technologies such as neighborhood electric vehicles, shared rides hailing, car sharing, bike sharing and scooters by providing supportive and safe infrastructure such as dedicated lanes, charging and parking/drop-off space • Improve access to services through technology—such as telework and telemedicine as well as other incentives such as a "mobility wallet," an app-based system for storing transit and other multi-modal payments • Identify ways to incorporate "micro-power grids" in communities, for example solar energy, hydrogen fuel cell power storage and power generation	Consistent The Housing Element Update would create sustainable mixed-use, mixed-income neighborhoods across the City and provide opportunities for housing, jobs, transit, and basic amenities for all segments of the population. Furthermore, Policy 3.2.7 under Objective 3.2 of the Housing Element Update aims to provide environmentally sustainable development standards and incorporate sustainable best practices in building and zoning code updates.
Support Implementation of Sustainability Policies • Pursue funding opportunities to support local sustainable development implementation projects that reduce GHG emissions • Support statewide legislation that reduces barriers to new construction and that incentivizes development near transit corridors and stations • Support local jurisdictions in the establishment of Enhanced Infrastructure Financing Districts (EIFDs), Community Revitalization and Investment Authorities (CRIAs), or other tax increment or value capture tools to finance sustainable infrastructure and development projects, including parks and open space • Work with local jurisdictions/communities to identify opportunities and assess barriers to implement sustainability strategies • Enhance partnerships with other planning organizations to promote resources and best practices in the SCAG region • Continue to support long range planning efforts by local jurisdictions • Provide educational opportunities to local decision makers and staff on new tools, best practices and policies related to implementing the Sustainable Communities Strategy	Consistent Reasonably foreseeable development would be required to comply with energy efficiency lighting and light pollution reduction requirements included in the 2016 California Building Code, including the CALGreen Code, and the Los Angeles Building Code and Los Angeles Green Building Code (LAMC Chapter IX); the Los Angeles Building Code and Green Building Code largely incorporate and amend the 2013 California Building Code and CALGreen Code, respectively, For example, Subsection 99.05.106.8 of the Los Angeles Green Building Code sets restrictions on residential outdoor lighting, and Section 99.04.211.4 requires residences to be constructed with solar-ready features as specified in the California Energy Code. Furthermore, Policy 3.2.7 under Objective 3.2 of the Housing Element Update aims to provide environmentally sustainable development standards and incorporate sustainable best practices in building and zoning code updates.

SCAG 2020-2045 RTP/SCS Strategy	Housing Element Update Consistency
Promote a Green Region • Support development of local climate adaptation and hazard mitigation plans, as well as project implementation that improves community resiliency to climate change and natural hazards • Support local policies for renewable energy production, reduction of urban heat islands and carbon sequestration • Integrate local food production into the regional landscape • Promote more resource efficient development focused on conservation, recycling and reclamation • Preserve, enhance and restore regional wildlife connectivity • Reduce consumption of resource areas, including agricultural land • Identify ways to improve access to public park space	Consistent The Housing Element Update includes objectives, policies and implementation programs that would create sustainable mixed-use, mixed-income neighborhoods across the City and provide opportunities for housing and access to jobs, transit, and amenities (e.g., public parks) for all segments of the population. Reasonably foreseeable development would be required to comply with energy efficiency lighting and light pollution reduction requirements included in the 2016 California Building Code, including the CALGreen Code, and the Los Angeles Building Code and Los Angeles Green Building Code (LAMC Chapter IX); the Los Angeles Building Code and Green Building Code largely incorporate and amend the 2013 California Building Code and CALGreen Code, respectively, For example, Subsection 99.05.106.8 of the Los Angeles Green Building Code sets restrictions on residential outdoor lighting, and Section 99.04.211.4 requires residences to be constructed with solar-ready features as specified in the California Energy Code. Specifically, Policy 3.2.7 of the Housing Element Update aims to provide environmentally sustainable development standards and incorporate sustainable best practice in building and zoning code updates. Therefore, the project would reduce typical consumption of resources, including energy and water resources, and would support development of a green region.

As demonstrated in the above analysis, the Housing Element Update is consistent with the applicable General Plan and SCAG's 2020-2045 RTP/SCS. Therefore, impacts related to land use and planning would be less than significant.

Mitigation Measures

The Housing Element Update would not conflict with applicable General Plan and SCAG's 2020-2045 RTP/SCS policies; therefore, impacts would be less than significant and mitigation is not required.

Cumulative Impacts

Cumulative impacts related to land use and planning consider citywide development through 2029. As discussed in Section 4.11, *Population and Housing*, the Housing Element Update would involve the development of 420,327 housing units. However, the Housing Element Update would accommodate all projected citywide population and housing growth through 2029. As discussed in Section 3, *Project*

Description, the Housing Element Update includes a program to rezone for the creation of 220,000 additional units of capacity. The Rezoning Program will likely be accomplished through updates to the City's Community Plans (i.e., General Plan Land Use Element), an update to the City's Density Bonus program, targeted zone changes, updates to specific plans and overlays, or other zoning ordinances. Nonetheless, the Rezoning Program would be subject to applicable City regulations, environmental review processes, and RCMs. Therefore, cumulative impacts related to potential conflicts with exiting land use policies, programs, and regulations would be the same as project impacts under Impact 4.9-1 and would be ***less than significant***.

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4.10 NOISE

This section of the Draft EIR analyzes potential noise and vibration impacts associated with the Housing Element Update. Specifically, this section of the Draft EIR evaluates the incremental contribution to potential cumulative noise and vibration impacts resulting from housing development accommodated under the Housing Element Update. As discussed in the Initial Study (see Appendix A), all noise impacts associated with the Safety Element Update were found to be less than significant and were, therefore, scoped out of this EIR.

4.10.1 ENVIRONMENTAL SETTING

Due to the technical nature of noise and vibration impacts, a brief overview of basic noise principles and descriptors is provided below.

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 (California Department of Transportation [Caltrans] 2013). 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. 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 (Caltrans 2013).

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 pressure level, therefore, constitutes the additive force exerted by a sound corresponding to the sound frequency/sound power level spectrum (Caltrans 2013).

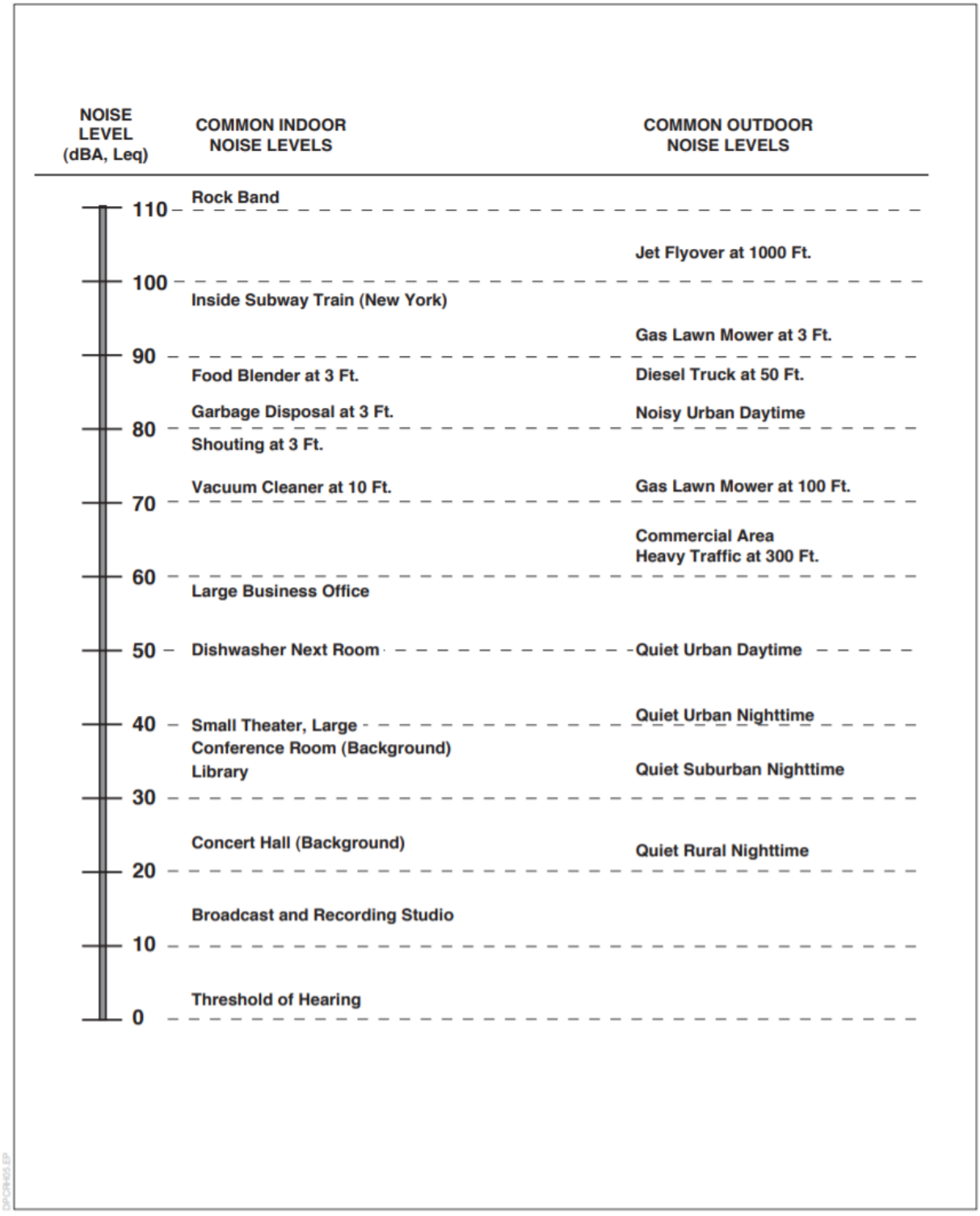
The typical human ear is not equally sensitive to the frequency range from 20 to 20,000 Hz. As a consequence, when assessing potential noise impacts, sound is measured using an electronic filter that deemphasizes the frequencies below 1,000 Hz and above 5,000 Hz in a manner corresponding to the human 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 (Caltrans 2013). Some representative common outdoor and indoor noise sources and their corresponding A-weighted noise levels are shown in Figure 4.10-1.

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 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 (Caltrans 2013). However, background noise levels generally 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 receiver over acoustically "hard" sites (e.g., asphalt and concrete surfaces) and 7.5 dBA per doubling of distance from the noise source to the receiver over acoustically "soft" sites (e.g., soft dirt, grass or scattered bushes and trees). For example, an outdoor condenser fan that generates a sound level of 60 dBA at a distance of 50 feet 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 receiver for hard sites and 4.5 dBA per doubling of distance for soft sites (Caltrans 2009).

Figure 4.10-1 Decibel Scale and Common Noise Sources



Source: State of California, Department of Transportation (Caltrans), Technical Noise Supplement. October 1998

Receivers 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. Atmospheric temperature inversion (i.e., increasing temperature with elevation) can increase sound levels at long distances. Other factors such as air temperature, humidity, and turbulence can, under the right conditions, also have substantial effects on noise levels (Caltrans 2013).

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 receiver further reduce the noise level if the receiver 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 receiver 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. In addition, a receiver 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 receiver, 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. Furthermore, structures with closed windows can further attenuate exterior noise by a minimum of 20 dBA to 30 dBA (Caltrans 2009).

Successive additions of sound to the community noise environment typically changes the community noise level from moment to moment, requiring the noise exposure to be measured over periods of time to legitimately characterize a community noise environment and evaluate cumulative noise impacts. The following noise descriptors are used to characterize environmental noise levels over time (Caltrans 2013).

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 (Caltrans 2013).

The World Health Organization's (WHO) 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 (Berglund et al. 1999).

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 (Caltrans 2013):

- 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 (Caltrans 2013).

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 (FTA 2018). 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 outdoor 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 (FTA 2018). 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. By comparison, most perceptible indoor vibration is caused by sources within buildings such as operation of mechanical equipment, movement of people, or the slamming of doors.

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. 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. 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. 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 receivers for vibration include buildings where vibration would interfere with operations within the building or cause damage (especially older masonry structures), locations where people sleep, and locations with vibration sensitive equipment (FTA 2018).

Typical human reactions to vibration are summarized in Table 4.10-1. The vibration velocity level threshold of perception for humans is approximately 65 VdB. A vibration velocity of 75 VdB is the approximate dividing line between barely perceptible and distinctly perceptible levels for many people. The range of interest is from approximately 50 VdB, which is the typical background vibration velocity level, to 90 VdB, which is the general threshold where minor damage can occur in fragile buildings.

Table 4.10-1 Human Response to Different Levels of Groundborne Vibration

Vibration Velocity Level	Human Reaction
65 VdB	Approximate threshold of perception for many people.
75 VdB	Approximate dividing line between barely perceptible and distinctly perceptible. Many people find that transportation vibration at this level is unacceptable.
85 VdB	Vibration acceptance only if there are an infrequent number of events per day.
Notes: VdB = decibel notation (i.e, vibration velocity amplitude) Source: FTA 2018	

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. 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 (FTA 2018). Therefore, for typical buildings, the groundborne noise decibel level is lower than the groundborne vibration velocity level.

Sensitive Receivers

Noise exposure goals for various types of land uses reflect the varying noise sensitivities associated with those uses. According to the City's General Plan Noise Element, the following land uses are considered noise-sensitive: single-family and multi-unit dwellings, long-term care facilities (including convalescent and retirement facilities), dormitories, motels, hotels, transient lodgings and other residential uses, houses of worship, hospitals, libraries, schools, auditoriums, concert halls, outdoor theaters, nature and wildlife preserves, and parks (Los Angeles 1999).

Vibration-sensitive receivers, which are similar to noise-sensitive receivers, include residences and institutional uses, such as hospitals, schools, and churches. However, vibration-sensitive receivers also include buildings where vibrations may interfere with vibration-sensitive equipment that is affected by vibration levels that may be well below those associated with human annoyance (e.g., recording studio s or medical facilities with sensitive equipment). Historic buildings can also be particularly sensitive to vibration.

The City encompasses 467 square miles and consists of a mix of urban uses (including residential, civic, commercial, industrial, and open space). As shown between Figure 3-3**,** *Land Use Designations Within the City*, and Figure 3-4, *Zoning Map of the City*, in Section 3, *Project Description*, the City predominantly consists of land that is designated and zoned for residential purposes. As such, residential uses comprise the majority of sensitive receivers in the City. Other sensitive receivers in the City include recreational uses (e.g., parks) and some commercial/retail (e.g., motels, hotels) and institutional (e.g., schools, hospitals) uses. Such uses are located throughout the City. Also, refer to Section 4.4, *Cultural Resources*, of this Draft EIR for a discussion of historic properties in the City, which may be sensitive to increases in vibration levels.

Existing Conditions

Noise Sources

Los Angeles is affected by a variety of noise sources, including mobile and stationary sources. Mobile noise is primarily generated by automobiles, trucks, trains, and airplanes. Mobile-source noises generally affect numerous receivers along lengths of roadways, railroad tracks, or flight paths. Stationary source noise is primarily generated by industrial and commercial land uses; however, all land uses can generate some

noise. As discussed in the City's General Plan Noise Element, significant noise sources include City roadways, highways, railroads (i.e., freight and passenger transit lines), airports, and some commercial or industrial uses (Los Angeles 1999).

The most common source of noise in the City is vehicular traffic (i.e., cars, trucks, buses, and motorcycles), which produces relatively constant sound that characterizes the minimum ambient noise levels. Ambient noise levels are generally highest during the daytime and peak traffic hours unless congestion substantially slows speeds. Infrequent or intermittent noise also is associated with vehicles, including sirens, vehicle alarms, slamming of doors, garbage and construction vehicle activity, and honking of horns. While noise from railroad and airport operations may be heard from a distance, these noise sources are predominantly localized and affect communities that are adjacent to these facilities (Los Angeles 1999).

As shown in Figure 4.10-1, *Decibel Scale and Common Noise Sources*, noisy urban areas or commercial areas (e.g., commercial districts with major arterial roadways and transit routes) can commonly reach noise levels between 60 dBA L_{eq} and 80 dBA L_{eq} during the daytime, whereas a common outdoor noise level associated with a quiet urban area (e.g., residential neighborhood with local or collector streets) is 50 dBA L_{eq} during the daytime. These noise levels typically decrease during nighttime hours as traffic activity slows, such that quiet urban and rural areas commonly experience nighttime noise levels of 40 dBA L_{eq} and 20 dBA L_{eq}, respectively (Caltrans 1998).

In cases where the actual ambient conditions are not known, the Los Angeles Municipal Code (LAMC) indicates that the City's presumed daytime and nighttime minimum ambient noise levels defined in LAMC Section 111.03 (as shown in Table 4.10-6) should be used to characterize noise conditions. According to Section 111.03, the City's presumed daytime and nighttime ambient noise levels for commercial and light industrial (i.e., light manufacturing) areas are 60 dBA and 55 dBA, respectively, whereas heavy manufacturing areas are presumed to experience daytime and nighttime noise levels of 65 dBA. Furthermore, the City's presumed daytime and nighttime ambient noise levels for residential-zoned areas are 50 dBA and 40 dBA, respectively. These noise levels are consistent with the common outdoor noise levels associated with commercial areas and quiet urban areas, as identified by Caltrans and shown in Figure 4.10-1 (i.e., 60 dBA L_{eq} during the daytime at commercial areas; 50 dBA L_{eq} during the daytime and 40 dBA L_{eq} during the nighttime at quiet urban areas).

Based on the size and scale of the City of Los Angeles, as a Citywide plan, taking sound measurements is not feasible. However, a review of sound measurements collected for the City's most recent completed draft EIRs for its Community Plan Updates provides a sample of the varied ambient sound conditions in the City.

- The Hollywood Community Plan Draft EIR included measurements which were taken to represent a wide variety of noise conditions in the Hollywood community Plan area, including residential neighborhoods, commercial corridors, schools and a cemetery. The daytime ambient noise levels ranged between 53.9 and 74 dBA L_{eq}. (See Hollywood Community Plan DEIR 4.12-11 to 13, Figure 4.12-2, Table 4.12-4 and 4.12-5.)
- The Downtown Plan Community Plan Draft EIR provided that a series of daytime sound measurements were taken to characterize existing conditions at a variety of locations to represent the range of noise conditions in the plan area. Measurements were taken in industrial areas, mixed industrial/commercial areas, areas with high concentration of residential and predominantly commercial areas. The study shows the noise levels in the Downtown Plan Area ranged from 70 to 79 dBA L_{eq}. (Downtown Community Plan Draft EIR at 4.11-6 and Table 4.11-3.)
- The San Pedro Community Plan Draft EIR sound measurements found ambient noise levels ranged from 56.2 to 72.6 dBA L_{eq}. (San Pedro CPU Draft EIR at 4.10-4.)
- The South Los Angeles and Southeast Los Angeles CPU EIR monitored a variety of noise conditions, including busy roadways and residential neighborhoods. The EIR found that the ambient noise levels for the South Los Angeles Community Plan Area ranged from 54.5 to 75.1 dBA L_{eq}. The Southeast Los Angeles Community Plan Area ranged from 65.3 to 73.7 dBA L_{eq}. (South/Southeast LA CP EIR at 4.12-4 and Table 4.12-1, Figure 4.12-2.)
- The Granada Hills-Knollwood/Sylmar CPU Draft EIR found the average ambient noise in the Granada Hills—Knollwood Area ranged from 56.3 to 73.7 dBA L_{eq}. (Granada Hills-Knollwood CPU DEIR at 4.10-4, Table 4.10-2, Figure 4.10-1.) The Sylmar Plan area ambient noise level ranged from 53.8 to 70.8 dBA L_{eq}. (Granada Hills-Knollwood/Sylmar CPU DEIR at 4.10-7, Table 4.10-4, and Figure 4.10-2.)
- The West Adams CPU DEIR found the ambient noise in the plan area ranged from 51.2 to 75.5 dBA L_{eq}. (West Adams CPU DEIR at 4.12-8, Table 4.12-4, Figure 4.12-2.)

From the Community Plan EIR measurements it can be seen that the presumed ambient noise levels are much lower in many cases than actual measurements. However, as actual ambient measurement of the City was not feasible, the relevant impact analysis will rely on the presumed ambient noise levels from the LAMC to be conservative.

Vibration Sources

Sources of vibration in the City are also dominated by vehicular movement. Like mobile-source noises, vibration by vehicular movement generally affects numerous receivers along lengths of roadways and depends on pavement and type and weight of the vehicle. Vibration may also be generated by construction equipment (e.g., earth-moving equipment, pile driving); however, these sources are temporary and would

vary on a project-by-project basis. More permanent, but intermittent, vibration may also be generated by railroad and airport operations, which would affect communities adjacent to these facilities. In addition, other commercial or industrial activities may generate vibration such as from the use of heavy equipment (e.g., businesses that recycle construction debris).

4.10.2 REGULATORY FRAMEWORK

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 (USEPA 1974). 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 in this section.

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. However, the FTA has adopted vibration criteria for use in evaluating vibration impacts from construction activities (FTA 2018). The vibration damage criteria adopted by the FTA are shown in Table 4.10-2.

Table 4.10-2 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 vibration damage	0.12
Notes: PPV = peak particle velocity; in./sec. = inches per second Source: FTA 2018	

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. The FTA defines Category 1 as buildings where vibration would interfere with operations in 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 4.10-3**.** No thresholds have been adopted or recommended for commercial or office uses.

Table 4.10-3 Vibration Impact Criteria for General Assessment

Land Use Category	Frequent Events[1]	Occasional Events[2]	Infrequent Events[3]
Category 1: Buildings where vibration would interfere with interior operations[4]	65 VdB	65 VdB	65 VdB
Category 2: Residences and buildings where people normally sleep	72 VdB	75 VdB	80 VdB
Category 3: Institutional land uses with primarily daytime use	75 VdB	78 VdB	83 VdB

[1] "Frequent Events" is defined as more than 70 vibration events of the same source per day.

[2] "Occasional Events" is defined as between 30 and 70 vibration events of the same source per day.

[3] "Infrequent Events" is defined as fewer than 30 vibration events of the same kind per day.

[4] This criterion is based on levels that are acceptable for most moderately sensitive equipment such as optical microscopes.

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. The decibel notation VdB acts to compress the range of numbers required to describe vibration.

Source: FTA 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 (OSHA 2004).

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, as presented in Figure 4.10-2 (OPR 2017), on the following page. 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."

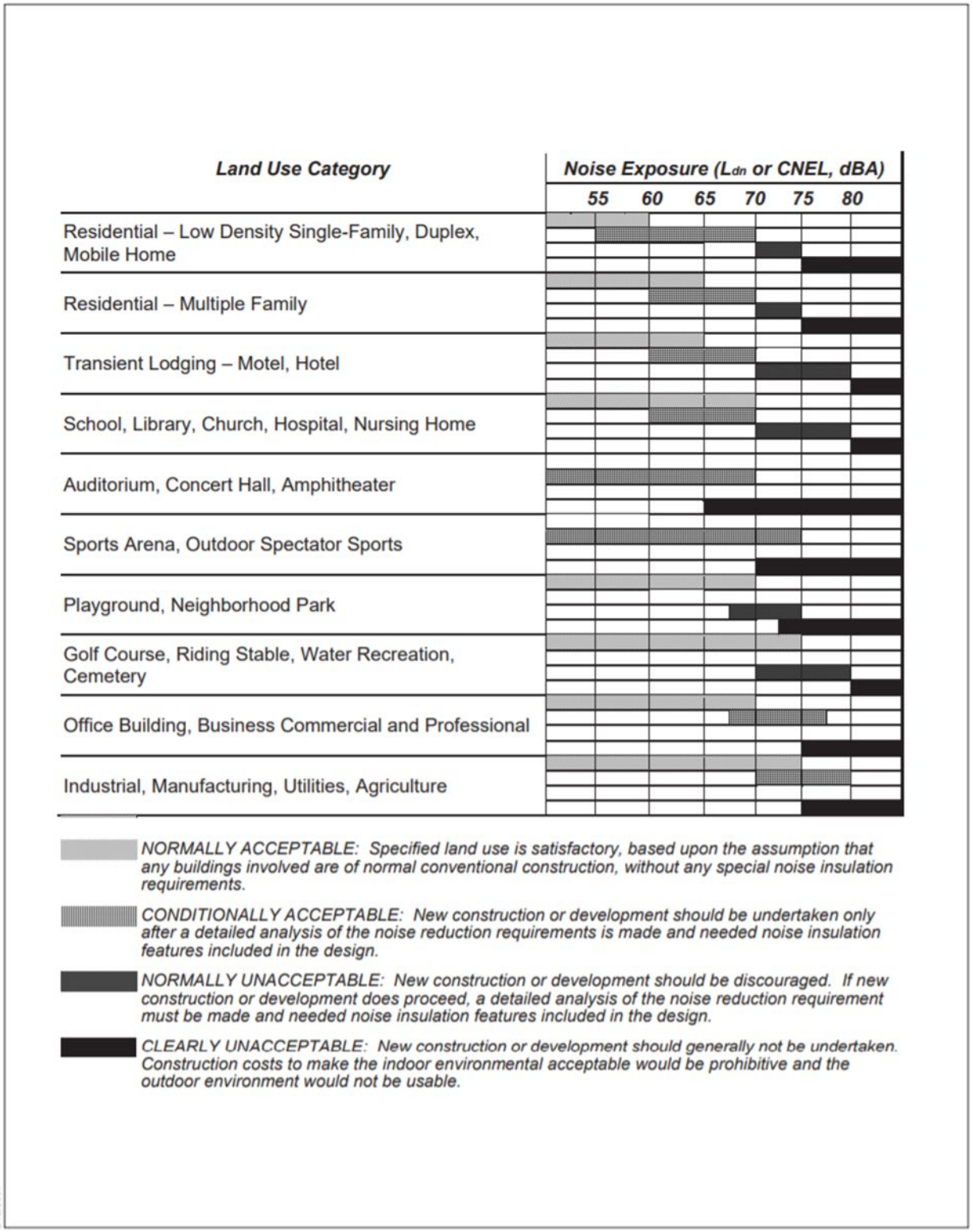
The City has developed its own compatibility guidelines in the Noise Element of the General Plan based in part on OPR Guidelines. California Government Code Section 65302 requires each county and city in the State to prepare and adopt a comprehensive long-range general plan for its physical development, 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 has not adopted statewide standards or regulations for evaluating vibration or groundborne noise impacts from land use development projects. However, Caltrans, in its *Transportation and Construction Vibration Guidance Manual*, recommends the following vibration thresholds, shown in Table 4.10-4 that are more practical than those provided by the FTA (Caltrans 2013).

Figure 4.10-2 Guidelines for Noise Compatible Land Use



Source: State of California, General Plan Guidelines, Governor's Office of Planning and Research, 2003.

Table 4.10-4 Vibration Damage Potential Threshold Criteria

Structure and Condition	Maximum PPV (in./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 other/similar 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

Notes: PPV = peak particle velocity; in./sec. = inches per second

[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 2020

Caltrans also recommends the following vibration thresholds, shown in Table 4.10-5 for impacts related to human perception and subsequent annoyance.

Table 4.10-5 Vibration Annoyance Potential Threshold Criteria

Human Response	Maximum PPV (in./sec.)	
	Transient Sources [1]	Continuous/Frequent Intermittent Sources [2]
Barely perceptible	0.04	0.01
Distinctly perceptible	0.25	0.04
Strongly perceptible	0.90	0.10
Severe	2.00	0.40

Notes: PPV = peak particle velocity; in./sec. = inches per second

[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 2020

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 (ALUC) and for coordinating the airport planning of public agencies within the county. The ALUC 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 ALUC 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.

There are several airports in the City or its vicinity, including the Los Angeles International Airport, Santa Monica Municipal Airport, Whiteman Airport, Van Nuys Airport, Hollywood Burbank Airport, Long Beach Airport, San Gabriel Valley Airport, and Hawthorne Municipal Airport. The Los Angeles County ALUC is responsible for implementing airport land use plans for these airports that promote compatibility between each airport in the county and the surrounding land uses to ensure that hazardous conditions, including incompatible noise levels, are not created (Los Angeles County 1991).

Local

Los Angeles Municipal Code

The City of Los Angeles Noise Regulations are provided in Chapter XI of the LAMC. LAMC Section 111.02 provides procedures and criteria for the measurement of the sound level of "offending" noise sources. In accordance with the LAMC, a noise source that causes a noise level increase of 5 dBA over the existing average ambient noise level as measured at an adjacent property line creates a noise violation. This standard applies to radios, television sets, air conditioning, refrigeration, heating, pumping and filtering equipment, powered equipment intended for repetitive use in residential areas, and motor vehicles driven on-site. To account for people's increased tolerance for short-duration noise events, the Noise Regulations provide a 5 dBA allowance for a noise source that causes noise lasting more than 5 but less than 15 minutes in any one-hour period, and an additional 5 dBA allowance (for a total of 10 dBA) for a noise source that causes noise lasting 5 minutes or less in any one-hour period.

The LAMC indicates that, in cases where the actual ambient conditions are not known, the City's presumed daytime (7:00 AM to 10:00 PM) and nighttime (10:00 PM to 7:00 AM) minimum ambient noise levels should be used, as shown in Table 4.10-6. For example, for residential-zoned areas, the presumed ambient noise level is 50 dBA during the daytime and 40 dBA during the nighttime.

Table 4.10-6 City of Los Angeles Presumed Ambient Noise Levels

Zone	Daytime Hours (7 AM to 10 PM) dBA L_{eq}	Nighttime Hours (10 PM to 7 AM) dBA L_{eq}
Residential (A1, A2, RA, RE, RS, RD, RW1, RW2, R1, R2, R3, R4, R5)	50	40
Commercial (P, PB, CR, C1, C1.5, C2, C4, C5, CM)	60	55
Manufacturing (M1, MR1, MR2)	60	55
Heavy Manufacturing (M2, M3)	65	65
Source: LAMC Section 111.03.		

LAMC Section 112.01 prohibits noise from radios, musical instruments, television sets, and other sound-amplifying devices from being audible at a distance in excess of 150 feet from the property line of the noise source within 500 feet of any residential zone or from exceeding the ambient noise level on the premises of

LAMC Section 112.02 limits increases in noise levels from air conditioning, refrigeration, heating, pumping and filtering equipment. Such equipment may not be operated in such manner as to create any noise that would cause the noise level on the premises of any other occupied property, or, if a condominium, apartment house, duplex, or attached business, within any adjoining unit, to exceed the ambient noise level by more than 5 dB.

LAMC Section 112.04 prohibits the operation of any lawn mower, backpack blower, lawn edger, riding tractor, or any other machinery equipment, or other mechanical or electrical device, or any hand tool that creates a loud, raucous or impulsive sound, within any residential zone or within 500 feet of any residence between 10:00 PM and 7:00 AM. Section 113.01 prohibits rubbish and garbage collection within 200 feet of any residence between 9:00 PM and 6:00 AM.

LAMC Section 112.05 sets a maximum noise level for construction equipment of 75 dBA at a distance of 50 feet when operated within 500 feet of a residential zone. Compliance with this standard shall not apply where compliance therewith is technically infeasible.[1]

LAMC Section 41.40 prohibits construction between the hours of 9:00 PM and 7:00 AM Monday through Friday, 6:00 PM and 8:00 AM on Saturday, and at any time on Sunday (i.e., construction is allowed Monday through Friday between 7:00 AM to 9:00 PM; and Saturdays and national holidays between 8:00 AM to 6:00 PM). In general, the City's Department of Building and Safety enforces Noise Ordinance provisions relative to equipment and the Los Angeles Police Department (LAPD) enforces provisions relative to noise generated by people.

LAMC Section 113.01 prohibits collecting or disposing of rubbish or garbage, operating any refuse disposal truck, or collecting, loading, picking up, transferring, unloading, dumping, discarding, or disposing of any rubbish or garbage, as such terms are defined in LAMC Section 66.00, within 200 feet of any residential building between the hours of 9:00 PM and 6:00 AM of the following day, unless a permit has been duly obtained beforehand from the Board of Police Commissioners.

[1] In accordance with the City's Noise Ordinances, "technically feasible" means that the established noise limitations can be complied with at a project site, with the use of mufflers, shields, sound barriers, and/or other noise reduction devices or techniques employed during the operation of equipment.

LAMC Section 114.03 prohibits the loading or unloading of any vehicle, operation of any dollies, carts, forklifts, or other wheeled equipment, which causes any impulsive sound, raucous or unnecessary noise within 200 feet of any residence between 10:00 PM and 7:00 AM.

LAMC Section 91.1206 establishes noise insulation performance standards to protect persons within new hotels, motels, dormitories, residential care facilities, apartment houses, dwellings, private schools, and places of worship from the effects of excessive noise, including but not limited to, hearing loss or impairment and interference with speech and sleep. According to Subsection 91.1206.14.1, these structures shall be designed to prevent the intrusion of exterior noise beyond prescribed levels when located in noise critical areas, such as proximity to highways, country roads, city streets, railroads, airports, and commercial or industrial areas. Proper design shall include, but shall not be limited to, orientation of the structure, setbacks, shielding, and sound insulation of the building itself. Specifically, Subsection 91.1206.14.2 limits interior noise levels attributable to exterior sources to 45 dBA L_{dn} or CNEL in any habitable room. Worst-case noise levels, either existing or future, are to be used as the basis for determining compliance with this requirement. Future noise levels are to be predicted for a period of at least ten years from the time of building permit application. Furthermore, according to Subsection 91.1206.14.3, structures identified under Subsection 91.1206.1 that are exposed to airport noise greater than 60 dBA L_{dn} or CNEL, shall require an acoustical analysis showing that the proposed design will achieve the allowable interior noise level.

City of Los Angeles General Plan Noise Element

The Noise Element of the City's General Plan policies include the CNEL guidelines for land use compatibility, as shown in Table 4.10-7, and includes a number of goals, objectives, and policies for land use planning purposes. The overall purpose of the Noise Element is to guide policymakers in making land use determinations and in preparing noise ordinances that would limit exposure of citizens to excessive noise levels.

The City's land use compatibility guidelines determine the normally acceptable, conditionally acceptable, normally unacceptable, and clearly unacceptable noise levels for various land uses. As shown in Table 4.10-7, ambient noise up to 55 CNEL is "normally acceptable" for single-family residences and ambient noise up to 60 CNEL is "normally acceptable" for multi-family residences. Consistent with State interior noise level standards (CBC, Title 24, Part 2, Section 1206.4) the Noise Element also requires that interior noise not exceed 45 CNEL in any habitable room (Los Angeles 1999).

Table 4.10-7 Guidelines for Noise Compatible Land Use (CNEL)

Land Use Category	Normally Acceptable[1]	Conditionally Acceptable[2]	Normally Unacceptable[3]	Clearly Unacceptable[4]
Residential Single-Family, Duplex, Mobile Homes	50-55	55-70	70-75	Above 75
Residential Multi-Family Homes	50-60	60-70	70-75	Above 75
Transient Loading – Motels, Hotels	50-60	60-70	70-80	Above 75
Schools, Libraries, Churches, Hospitals, Nursing Homes	50-60	60-70	70-80	Above 80
Auditoriums, Concert Halls, Amphitheaters	--	50-65	--	Above 65
Sports Arenas, Outdoor Spectator Sports	--	50-70	--	Above 70
Playgrounds, Neighborhood Parks	50-65	--	65-75	Above 75
Golf Courses, Riding Stables, Water Recreation, Cemeteries	50-70	--	70-80	Above 80
Office Buildings, Business and Professional Commercial	50-65	65-75	Above 75	--
Agriculture, Industrial, Manufacturing, Utilities	50-70	70-75	Above 75	--

[1] Specified land use is satisfactory, based upon the assumption that any buildings involved are of normal conventional construction without any special noise insulation requirements.

[2] New construction or development should be undertaken only after a detailed analysis of the noise reduction requirements is made and needed noise insulation features included in the design. Conventional construction, but with closed windows and fresh air supply systems or air conditioning will normally suffice.

[3] New construction or development should generally be discouraged. If new construction or development does proceed, a detailed analysis of the noise reduction requirements must be made and needed noise insulation features included in the design.

[4] New construction or development should generally not be undertaken.

Source: Los Angeles 1999

The Noise Element also addresses noise mitigation regulations, strategies, and programs, and delineates the authority of federal, State, and City bodies in regulating automotive, rail, aircraft, and nuisance noise. Table 4.10-8 identifies the Noise Element objectives, policies, and implementation programs that are relevant to the development associated with the Housing Element Update under the City's overarching goal of creating an environment where noise does not reduce the quality of urban life. The Noise Element does not include any mandatory standards for land use planning or quantitative thresholds for construction or operational groundborne vibration.

Table 4.10-8 General Plan Noise Objectives, Policies, and Programs

General Plan Noise Objectives, Policies, and Programs	
Objective 2 (Nonairport): Reduce or eliminate nonairport related intrusive noise, especially at noise sensitive uses.	
Policy 2.2	Enforce and/or implement applicable city, State, and federal regulations intended to mitigate proposed noise producing activities, reduce intrusive noise and alleviate noise that is deemed a public nuisance.
Program 5	Continue to enforce, as applicable, city, state, and federal regulations intended to abate or eliminate disturbances of the peace and other intrusive noise.
Program 6	When processing building permits, continue to require appropriate project design and/or insulation measures, in accordance with the California Noise Insulation Standards or any amendments thereto or subsequent related regulations, so as to assure that interior noise levels will not exceed the minimum ambient noise levels, as set forth in the City's noise ordinance for a particular zone or noise sensitive use, as defined by the California Noise Insulation Standards.
Objective 3 (Land Use Development): Reduce or eliminate noise impacts associated with proposed development of land and changes in land use.	
Policy 3.1	Develop land use policies and programs that will reduce or eliminate potential and existing noise impacts.
Program 11	For a proposed development project that is deemed to have a potentially significant noise impact on noise sensitive uses, require mitigation measures, as appropriate, in accordance with California Environmental Quality Act and City procedures.
Program 12	When issuing discretionary permits for a proposed noise-sensitive use or subdivision of four or more detached single-family units and which use is determined to be potentially significantly impacted by existing or proposed noise sources, require mitigation measures, as appropriate, in accordance with procedures set forth in the California Environmental Quality Act so as to achieve an interior noise level CNEL of 45 dB, or less, in any habitable room as required by LAMC Section 91.
Program 13	Continue to plan, design and construct or oversee construction of public projects, and projects on City owned properties, so as to minimize potential noise impacts on noise sensitive uses and to maintain or reduce existing ambient noise levels.
Program 16	Use, as appropriate, the "Guidelines for Noise Compatible Land Use", or other measures that are acceptable to the City, to guide land use and zoning reclassification, subdivision, conditional use and use variance determinations and environmental assessment considerations, especially relative to sensitive uses within a CNEL of 65 dB airport noise exposure areas and within a line-of-sight of freeways, major highways, railroads or truck haul routes.
Source: Los Angeles 1999	

4.10.3 ENVIRONMENTAL IMPACTS

Thresholds of Significance

In accordance with Appendix G of the CEQA Guidelines, the Housing Element Update's noise and vibration impacts would be significant if it would:

- **Threshold 4.10-1:** Generate a substantial temporary 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.
- **Threshold 4.10-2:** Generate a substantial 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.
- **Threshold 4.10-3:** Generate excessive groundborne vibration or groundborne noise levels.
- **Threshold 4.10-4:** For a project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, expose people residing or working in the project area to excessive noise levels.

The following discussion identifies specific thresholds used to analyze the general CEQA thresholds listed above.

Construction Noise

Based on LAMC Section 112.05, noise from construction equipment located within 500 feet of a residential zone would constitute a significant impact if it resulted in an increase to ambient noise levels such that they would exceed 75 dBA between 7:00 AM and 10:00 PM, as measured at a distance of 50 feet from the source. For purposes of analyzing construction impacts in this EIR, this Code standard will be expanded to include sensitive uses in addition to a "residential zone," and will not include the waiver where reducing noise below 75 dBA is technically infeasible. Based on LAMC Section 41.40, construction noise would also be significant if generated outside of allowable construction hours.

On-site Operational Noise

The LAMC includes standards that regulate operational noise sources in the City. The most significant potential impact under the Housing Element Update is the potential construction and operation of 420,327 housing units. The Housing Element Update would result in a significant impact if accommodated housing development generates noise from on-site sources in excess of LAMC standards included in Sections 112.01, 112.02, 112.04, 113.01, 114.01, and 114.03, and when compared to the City's presumed ambient noise levels shown in Table 4.10-6 (as described under *Regulatory Framework*), which collectively regulate noise from

operations that are typical to residential uses (e.g., sound-amplifying devices; heating, ventilation, and air conditioning [HVAC] equipment, lawn maintenance equipment, hand tools, wheeled equipment, outdoor activities).

Off-site Traffic Noise

Off-site project noise (i.e., roadway noise) would have a significant impact if permanent ambient noise level measured at the property line of affected uses increases by 3 CNEL to or within the "normally unacceptable" or clearly unacceptable" categories, as shown in Table 4.10-7 or any 5 CNEL or more increase in noise level.

Groundborne Vibration

The City has not adopted a significance threshold to assess vibration impacts during construction and operation. Therefore, the Caltrans *Transportation and Construction Vibration Guidance Manual (*2020) is used to evaluate potential construction vibration impacts related to both potential building damage and human annoyance. Construction vibration impacts from housing development would be significant if vibration levels exceed the Caltrans criteria shown in Table 4.10-4 and Table 4.10-5. For example, impacts would be significant if vibration levels exceed 0.5 in./sec. PPV for residential structures and 2.0 in./sec. PPV for commercial structures, which is the limit where minor cosmetic (i.e., non-structural) damage may occur to these buildings. In addition, construction vibration impacts from housing development would cause human annoyance at nearby receivers if vibration levels exceed 0.25 in./sec. PPV, which is the limit where vibration becomes distinctly perceptible from barely perceptible.

Airport Noise

Per LAMC Subsection 91.1206.14.3, projects would be required to conduct an acoustical analysis showing that the proposed design will achieve the allowable interior noise level if new residences are exposed to airport noise greater than 60 CNEL as determined by available noise contour maps in the City's General Plan Noise Element and Los Angeles County ALUP.

Methodology

As discussed in Section 3, *Project Description*, the Housing Element Update is a plan to accommodate forecasted growth and existing and future need. This section considers impacts from the forecasted growth being accommodated by the Housing Element Update. The following discussion describes the methodology, including models, used to evaluate the significance of potential noise and vibration impacts related to the forecasted construction and operation of 420,327 housing units, particularly for project construction noise, operational traffic noise, and construction vibration.

Construction Noise

The primary source of temporary noise associated with Housing Element Update would be construction activities associated with accommodated housing development. Construction equipment can be considered to operate in two modes: stationary and mobile. Stationary equipment operates in a single location for one or more days at a time, with either fixed-power operation (e.g., pumps, generators, and compressors) or variable-power operation (e.g., pile drivers, rock drills, and pavement breakers). Mobile equipment moves around a construction site with power applied in cyclic fashion, such as bulldozers, graders, and loaders (FTA 2018). Each phase of construction has its own noise characteristics due to specific equipment mixes; some will have higher continuous noise levels than others and some may have high-impact intermittent noise levels (FTA 2018). Therefore, construction noise levels may fluctuate depending on the type of equipment being used, construction phase, or equipment location. In typical construction projects on vacant sites, grading activities typically generate the highest noise levels because grading involves the largest equipment and covers the greatest area. Foundation excavation and construction is often the second loudest phase, followed by paving and building construction.

For assessment purposes, noise levels for common construction equipment provided in the FTA Transit Noise and Vibration Impact Assessment (2018) guidance document were used to compare potential noise levels associated with housing development accommodated under the Housing Element Update with LAMC Section 112.05.

In general, smaller housing developments on urban infill sites are not likely to result in substantial construction noise impacts because construction activities at these sites are inherently limited by the size of the site. The size of urban infill project sites typically limits the use of the largest (i.e., noisiest) pieces of heavy-duty equipment, the size of the development, and the related duration of construction activities. Although some individuals may find construction noise of any kind or of any duration very disturbing, as a general matter, typical construction (including with the implementation of the regulatory compliance measures [RCMs] described in further detail in the following subsection) does not result in and would not be considered a significant impact. Therefore, while urban infill housing developments that meet the following criteria could result in disturbance to residents and employees at adjacent properties, resulting noise levels typically would not result in significant construction noise impacts:

- One subterranean level or less (generally 20,000 cubic yards or less of material);
- Construction durations of less than 18 months (excluding interior finishing);
- Equipment rated less than 300 horsepower, typically small and medium backhoes, bulldozers, etc.; and
- No potential for impact pile driving.

Larger projects that require extended construction or heavy-duty equipment could expose sensitive uses to more continuous and/or louder noise impacts and result in significant short-term noise exposure. When noise-sensitive land uses (e.g., residences, schools, libraries, hospitals) are located within 500 feet of a project site, projects that meet one or more of the characteristics below may have the potential to result in significant impacts.

- Two subterranean levels or more (generally more than 20,000 cubic yards of material);
- Construction durations of 18 months or more (excluding interior finishing);
- Use of large, heavy-duty equipment rated 300 horsepower or greater; or
- The potential for impact pile driving.

On-site Operational Noise

The primary on-site noise sources associated with operation of housing developments including in mixed use developments, and those discussed in this analysis, would include noise from stationary HVAC equipment, on-site vehicle movement (e.g., delivery and trash hauling), outdoor activities, and off-site traffic. Specific planning data for HVAC systems are not available at this stage of analysis; however, for a reasonable analysis, a typical to larger-sized residential condenser was used to determine project HVAC noise. The unit used for this analysis is a Carrier 38HDR060 split system condenser. The manufacturer's noise data lists the unit as having a sound power level of 72 dBA (Carrier 2011).

Off-site Traffic Noise

Housing development accommodated under the Housing Element Update would generate vehicle trips, thereby increasing traffic on area roadways. The project's transportation impacts were analyzed in by Fehr & Peers. Refer to Section 4.14, *Transportation*, for a detailed analysis of the Proposed Project's impacts related to transportation and traffic. The overall increase in traffic noise was estimated using vehicle miles traveled (VMT) data from the transportation analysis for existing conditions (Year 2021), future without project conditions (i.e., Year 2029 without the Housing Element Update), and future with project conditions (i.e., Year 2029 with the Housing Element Update).

Groundborne Vibration

Operation of housing developments generally would not include any substantial vibration sources (e.g., use of heavy equipment). Construction activities would have the potential to generate groundborne vibration affecting sensitive receivers and/or structures adjacent to a construction noise, especially during typical grading work or pile driving work potentially required for a hillside project. A quantitative assessment of potential vibration impacts from construction activities was conducted using the equations

developed by Caltrans (Caltrans 2020). Table 4.10-9 shows typical vibration levels for various pieces of construction equipment used in the construction vibration assessment.

Table 4.10-9 Typical Vibration Levels for Construction Equipment

Equipment	PPV (in./sec.) at 25 Feet
Pile Driver (Impact)	0.644
Pile Driver (Sonic)	0.170
Vibratory Roller	0.210
Hoe Ram	0.089
Large Bulldozer	0.089
Caisson Drilling	0.089
Loaded Truck	0.076
Jackhammer	0.035
Small Bulldozer	0.003
Sources: FTA 2018; Caltrans 2020	

Because groundborne vibration could cause physical damage to structures and is measured in an instantaneous period, vibration impacts are typically modeled based on the distance from the location of vibration-intensive construction activities, which is conservatively assumed to be near the edge of a project site, to the edge of the nearest off-site structures. For assessment purposes, vibration levels for the construction equipment shown in Table 4.10-9 were modeled at various incremental distances between 25 feet and 100 feet to compare potential vibration levels associated with future development under the Housing Element Update with Caltrans criteria shown in Table 4.10-4 and Table 4.10-5.

Regulatory Compliance Measures

As discussed in *Regulatory Setting*, the City has established regulatory requirements related to construction and operational noise in the City. Among others, future housing development under the Housing Element Update would be required to comply with the following RCMs:

- **RCM-NOI-1 (LAMC Noise Ordinances):** The project shall comply with the City of Los Angeles Noise Ordinance No. 144,331 and 161,574 (see LAMC Section 112.05), and any subsequent ordinances, which prohibit the emission or creation of noise beyond certain levels.
- **RCM-NOI-2 (Construction Hours):** Construction shall be restricted to the hours of 7:00 AM to 9:00 PM Monday through Friday, and 8:00 AM to 6:00 PM on Saturday per LAMC Section 41.40.
- **RCM-NOI-3 (Construction Site Notice):** The project shall comply with the City of Los Angeles Building Regulations Ordinance No. 178,048 (see LAMC Section 91.106.4.8), which requires a construction site notice to be provided that includes the following information: job site address, permit

number, name and phone number of the contractor and owner or owner's agent, hours of construction allowed by code or any discretionary approval for the site, and City telephone numbers where violations can be reported. The notice shall be posted and maintained at the construction site prior to the start of construction and displayed in a location that is readily visible to the public.

- **RCM-NOI-4 (HVAC Noise):** The project shall comply with the LAMC Section 112.02, which requires that any heating, ventilation, and air conditioning (HVAC) system within any zone of the City not cause an increase in ambient noise levels on any other occupied property or if a condominium, apartment house, duplex, or attached business, within any adjoining unit to exceed the ambient noise level by more than 5 dBA.

Project Impacts and Mitigation Measures

Impact 4.10-1	Would the Housing Element Update result in the generation of a substantial temporary 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 4.10-1 Construction associated with housing development accommodated under the Housing Element Update would be required to comply with RCM-NOI-1 through NOI-3 as well as LAMC Section 112.05 and Section 41.40. However, larger developments could involve construction with lengthy durations, substantial soil movement, use of large, heavy-duty equipment, and/or pile driving near noise-sensitive land uses that would result in significant impacts that also may not be feasibly mitigated to noise levels below 75 dBA at 50 feet from the source. Therefore, impacts generated by temporary construction noise would be ***significant and unavoidable***.

Future construction activity would require the use of a variety of noise-generating equipment that would result in temporary increases in ambient noise levels on an intermittent basis. Noise levels would fluctuate depending on the construction phase, equipment type and duration of use, distance between the noise source and receiver, and presence or absence of noise attenuation barriers. Typical noise levels at 50 feet from various types of equipment that may be used during construction are listed in Table 4.10-10. The loudest noise levels are typically generated by impact equipment (e.g., pile drivers) and heavy-duty equipment (e.g., cranes, scrapers, and graders). Construction noise would occur intermittently throughout construction and, in some instances, multiple pieces of equipment may operate simultaneously, generating overall noise levels that are incrementally higher than what is shown in Table 4.10-10.

Table 4.10-10 Maximum Noise Levels of Common Construction Equipment

Equipment	Typical Noise Level (dBA) at 50 feet from Source
Air Compressor	80
Backhoe	80
Compactor	82
Concrete Mixer	85
Concrete Pump	82
Concrete Vibrator	76
Crane, Derrick	88
Crane, Mobile	83
Dozer	85
Generator	82
Grader	85
Jackhammer	88
Loader	80
Paver	85
Pile-driver (Impact)	101
Pile-driver (Sonic	95
Pneumatic Tool	85
Pump	77
Roller	85
Saw	76
Scarifier	83
Scraper	85
Shovel	82
Truck	84
Source: FTA 2018	

Construction activities associated with housing development accommodated under the Housing Element Update are subject to the City's established RCMs, which include RCM-NOI-1 (LAMC Noise Ordinances), RCM-NOI-2 (Construction Hours), and RCM-NOI-3 (Construction Site Notice). LAMC Section 112.05 establishes that the maximum allowable noise level for construction equipment within 500 feet of any residential zone is 75 dBA when measured at 50 feet from the noise source. This restriction holds unless compliance is not technically feasible even with the use of noise "mufflers, shields, sound barriers, and/or other noise reduction devices or techniques."

Sensitive receivers are located throughout the City and could be exposed to noise associated with construction activities related to development accommodated under the Housing Element Update. As

previously discussed in *Environmental Setting*, sensitive receivers include existing residential, commercial/retail (e.g., motels, hotels, other transient lodgings), recreational (e.g., wildlife preserves and parks), and institutional (e.g., houses of worship, hospitals, libraries, and schools) land uses. Because specific development projects have not yet been determined at individual sites, this analysis assumes that sensitive receivers could be as close as 50 feet from future construction activities. As shown in Table 4.10-10, sensitive receivers would be exposed to noise levels ranging from 76 to 88 dBA at 50 feet from typical construction equipment, and could reach as high as 101 dBA through the use of pile drivers. Construction noise levels would vary depending on the type of equipment, the duration of use, and the distance to receivers. Engine noise reduction technology, including mufflers, continues to improve, but heavy construction equipment still generates noise exceeding ambient levels that could cause intermittent annoyance to nearby receivers. Noise associated with construction of development under the Housing Element Update would be expected of noise associated with typical residential construction; however, operation of heavy equipment could still exceed 75 dBA at 50 feet per LAMC Section 112.05 at residential zones or other sensitive receivers.

As previously discussed in *Methodology*, housing development accommodated under the Housing Element Update that could result in construction noise would tend to include relatively lengthy construction durations (i.e., longer than 18 months), two or more subterranean levels, use of heavier equipment, simultaneous use of multiple pieces of equipment, and generally noisier activities, such as the potential for impact pile driving. While these larger projects are not considered typical, they could potentially result in significant noise impacts, particularly upon noise-sensitive residential or other sensitive receivers located within 500 feet of a site. In particular, these larger projects could temporarily increase ambient noise levels such that they exceed 75 dBA at 50 feet from the construction equipment. Based on the above, it is anticipated that the Housing Element Update will have ***potentially significant*** impacts related to construction noise. The case studies below support this conclusion.

The types of housing units under the Housing Element Update would generally fall into five categories of development projects - multi-family residential development; single-family residential development; accessory dwelling units (ADU); mixed use development; and conversion and/or rehabilitation of existing nonresidential, residential and mixed-use structures to be used for housing. Impacts associated with these different housing types are informed by a review of environmental assessments of housing development in the City (see Table 4-2 in Section 4, *Environmental Analysis*) A review of the housing development in the City in Table 4-2 shows that out of the 54 projects, significant and unavoidable noise impacts were associated with 18 large multi-family residential developments and mixed use developments with residential uses. Of the 18 identified projects, 12 analyses determined that project construction would result in significant and unavoidable impacts related to construction noise, even with mitigation. The following

discusses potential construction noise impacts of these project types and associated mitigation measures, if any, included in these respective analyses.

- **Multi-family residential:** Multi-family residential projects may range in size from small apartment buildings with two to 10 units to larger apartment buildings and high-rise structures with hundreds of units. Multi-family developments of any size would generate construction noise. Small multi-family developments could be located in areas throughout the City; and, large multi-family development projects would primarily be located in Regional Centers and around transit. Additional multi-family developments of varying scales may also be accommodated in the High and Highest Resource Areas, as shown in Figure 3-5 in Section 3, *Project Description*, as a result of the Rezoning Program. Larger multi-family developments and/or those requiring greater excavation work, heavier equipment, and longer construction durations would have the greatest impact. However, developers would be required to comply with LAMC regulations governing construction noise. As listed in Table 4-2 the Hollywood and Wilcox Project is an example of a multi-family development that incorporated measures to reduce construction noise at off-site noise-sensitive receivers to the maximum degree feasible. The project involved the construction of 260 multi-family residential dwelling units, up to 10 percent (26 units) of which would be set aside for workforce housing and 17,800 square feet of commercial uses, comprising 11,020 square feet of retail, 3,580 square feet of office, and 3,200 square feet of restaurant uses. The EIR identified six sensitive receivers within 500 feet of the project site, five residences and one hotel. The project was expected to take about 2 years and involve demolition, grading, excavation for subterranean parking with approximately 58,000 cubic yards of soil, building foundations, building construction, paving and landscape. The EIR analysis determined that construction noise levels associated with project development would exceed a significance thresholds that the project would exceed ambient noise levels by 5 dBA or more at noise sensitive uses [from the 2006 City Threshold Guide]. The EIR found that:

  Noise impacts from Project-related construction activities occurring within or adjacent to the Project Site would be a function of the noise generated by construction equipment, the location of the equipment, the timing and duration of the noise-generating construction activities, and the relative distance to noise-sensitive receivers. Construction activities for the Project would generally include demolition, site grading and excavation for the subterranean parking garage, and building construction. Each stage of construction would involve the use of various types of construction equipment and would, therefore, have its own distinct noise characteristics. Demolition generally involves the use of backhoes, front-end loaders, and heavy-duty trucks. Grading and excavation typically requires the use of earth-moving equipment, such as excavators, front-end loaders, and heavy-duty trucks. Building construction typically involves the use of cranes, forklifts, concrete trucks, pumps, and delivery trucks. Noise from construction equipment would generate both steady-state and episodic noise that could be heard within and adjacent to the Project Site.

Individual pieces of construction equipment anticipated to be used during construction of the Project could produce maximum noise levels (L_{max}) of 74 dBA to 90 dBA at a reference distance of 50 feet from the noise source, as shown in Table IV.G-10 on page IV.G-27. These maximum noise levels would occur when equipment is operating under full power conditions (i.e., the equipment engine at maximum speed). However, equipment used on construction sites often operate under less than full power conditions, or part power. To more accurately characterize construction-period noise levels, the average (Hourly L_{eq}) noise level associated with each construction phase is calculated based on the quantity, type, and usage factors for each type of equipment that would be multiple pieces of equipment operating on part power, simultaneously. used during each construction phase. These noise levels are typically associated with multiple pieces of equipment operating on part power, simultaneously.

Table IV.G-11 on page IV.G-28 provides the estimated construction noise levels for various construction phases at the off-site noise-sensitive receivers. To present a conservative impact analysis, the estimated noise levels were calculated for a scenario in which all pieces of construction equipment were assumed to operate simultaneously and be located at the construction area nearest to the affected receivers. These assumptions represent the worst-case noise scenario because construction activities would typically be spread out throughout the Project Site, and, thus, some equipment would be farther away from the affected receivers. In addition, the noise modeling assumes that construction noise is constant, when, in fact, construction activities and associated noise levels are periodic and fluctuate based on the construction activities.

As discussed above, since construction activities would occur over a period longer than 10 days for all phases, the corresponding significance criteria used in the construction noise analysis is when the construction-related noise exceeds the ambient Leq noise level of 5 dBA at a noise-sensitive use. As presented in Table IV.G-11, construction activities would generate the highest noise during the demolition phase, as it is anticipated to have the highest noise generating construction equipment in the construction area compared to the Project's other construction stages. Therefore, the potential noise impacts (i.e., noise increase over the ambient level) would be highest during the demolition phase. As indicated in Table IV.G-11, the estimated noise levels during all stages of Project construction would be below the significance criteria at off-site receiver locations R2, R4, R5, and R6. Without implementation of mitigation, the estimated noise levels at receiver locations R1 and R3 would exceed the 5-dBA significance criteria by up to 35.8 dBA and 5.0 dBA, respectively. Therefore, temporary noise impacts associated with the Project's on-site construction would be significant. (Hollywood and Wilcox DEIR at IV.G-25-26.)

[…]

As indicated in Table IV.G-12, the noise levels generated by construction trucks during all stages of Project construction would be consistent with the existing daytime ambient noise levels along the anticipated haul

route and therefore would be below applicable 5-dBA significance criteria. Therefore, temporary noise impacts from off-site construction traffic would be less than significant. (Hollywood and Wilcox DEIR at IV.G.29.)

The EIR identified the following mitigation measures:

Mitigation Measure NOI-MM-1: A temporary and impermeable sound barrier shall be erected at the locations listed below. At plan check, building plans shall include documentation prepared by a noise consultant verifying compliance with this measure.

- *Along the southern property line of the Project Site between the construction areas and the hotel building directly south and southeast of the Project Site (receiver R1). The temporary sound barrier (minimum sound transmission class 25) shall be designed to provide a minimum 15-dBA noise reduction at the ground level of receiver R1.*
- *Along the western property line of the Project Site between the construction areas and hotel west of the Project Site (receiver R3). The temporary sound barrier shall be designed to provide a minimum 6-dBA noise reduction at the ground level of receiver R3. (Hollywood and Wilcox DEIR at IV.G-43.)*

With imposition of the mitigation measure the EIR concluded that while some off-site sensitive receivers impacts would be reduced, they would not be reduced to a less than a 5 dBA increase. Under worse-case conditions ambient increase could still exceed ambient by 21 dBA.

- **Single-family residential:** Single-family residential projects may range in size and scale from smaller or larger single-family homes, to small-lot or multi-lot single-family subdivisions. Like most residential development anticipated under the Housing Element Update, new single-family projects of varying scales (including small-lot subdivisions) would primarily be located in residential areas throughout the City. However, single-family developments of any size would generate construction noise. Moreover, single-family development located at hillsides could require pile driving to allow for stronger foundation support. With the exception of projects requiring pile driving, larger single-family developments would typically result in greater construction noise impacts in comparison to smaller projects considering that they may require greater excavation work, heavier equipment, and longer construction durations. Nonetheless, developers would be required to comply with LAMC regulations governing construction activities. As listed in Table 4-2, an example of this development type is the Edinburgh Avenue SLS Project, which involved the demolition of the Bungalow Court and Garage and construction of a small lot subdivision consisting of eight, single-family residences, over the course of a 12-month construction schedule. The EIR analysis determined there were four sensitive receivers, three multi-family developments and a senior center within 500 feet. Construction would take place over one year and involve demolition, grading, trenching, building construction and paving and

architectural coating. The EIR relied on the 2006 City Thresholds of 10 dB over ambient for construction of not more than 10 days in three month period. The EIR found that individual pieces of construction equipment anticipated during Project construction, including concrete saw, crane, dozer, forklift, paver, loader, and air compressor, among others, could produce maximum noise levels of 75 dBA to 90 dBA at 50 feet from the noise source. The EIR concluded that construction noises levels were estimated to be a maximum of 99 dBA at one receiver location, 85 dBA at two other sensitive receivers. (Edinburgh DEIR at IV.C-25; and FEIR at III-6.) The EIR identified the following mitigation measures:

MM-NOISE-1: The Project contractor shall implement noise reduction strategies to reduce noise levels during construction affecting noise sensitive residential uses on the north, south, east, and west boundaries of the Project Site. The Project contractor shall limit the use of noisy heavy equipment (refer to Table IV.C-10 of the EIR) to 10 days or fewer within a three-month period. Noise reduction strategies shall include one or a combination of the following actions described below to achieve a 15 dBA noise level reduction performance standard. The Project contractor will maintain documentation during construction activities regarding manufacturer-provided equipment noise specification ratings; manufacturer-provided noise reduction ratings for noise shielding, baffling, muffling devices, and/or sound curtains or blankets; daily logs of heavy equipment used; and periodic noise monitoring as necessary to demonstrate compliance with the performance standard. The Project contractor will provide documentation and periodic reports as requested by the City.

- *Provide a temporary construction noise barriers (i.e., wood, sound blanket, noise control acoustic barriers) between the Project construction site and residential development along the entire south, and east, north, and west boundaries of the Project Site during early Project construction phases (up to the start of framing) when the use of heavy equipment is prevalent.*
- *Use construction equipment, fixed or mobile, that individually generates less noise than presumed in the FHWA RCNM (refer to Table IV.C-10 of the Draft EIR). Examples of such equipment are compact, small, or mini model versions of backhoes, cranes, excavators, loaders, tractors, of other applicable equipment. Construction equipment noise levels shall be documented based on manufacturer's specifications.*
- *Limit the number of hours of construction equipment operation or the number of pieces of concurrently operating equipment, fixed or mobile, on the Project Site to the minimum number needed to conduct the work.*
- *Use construction equipment, fixed or mobile, that are equipped with properly operating and maintained noise shielding, baffling, and/or muffling devices, consistent with manufacturers' standards. The reduction in noise level from noise shielding, baffling, and/or muffling devices shall be documented based*

on manufacturer's specifications with documentation maintained on-site during early construction phases.

- *In consultation with and if agreed to by neighboring property owners, provide temporary sound curtains or blankets on windows at noise sensitive residential uses adjacent to or across the street from the Project Site on the north, south, east, and west boundaries of the Project Site.*
- *Alternately, residents of properties adjacent to or across the street from the Project Site may be offered temporary relocation until construction has moved beyond phases when use of heavy equipment is prevalent. In the event relocation is pursued, prior to the onset of construction, the Project Applicant shall develop a relocation plan to the satisfaction of the City. (Edinburgh FEIR at III-5 and 6.)*

The EIR also identified project design feature (PDF) NOISE-1 which required that applicants equip all construction equipment, fixed or mobile, with properly operating and maintained noise silencers, consistent with manufacturers' standards. The EIR analysis concluded that, with implementation of the mitigation measure and PDF, construction noise levels associated with project development would be reduced to a less than significant level. (Edinburgh FEIR at III-6.)

- **ADUs**: ADUs are created through a building addition or conversion of existing floor area and detached ADUs of various scales, which are allowed in any zone that allows for residential use as well as on any site that contains an existing residential use. An ADU would result in one or more additional units on a property containing existing or proposed residential units. ADUs are typically smaller in size than other residential unit types, and generally do not exceed more than 1,200 square feet in size. While development of an ADU would still be subject to LAMC standards governing construction hours, such activities would typically require less intensive equipment and would involve a quicker turnaround to completion. Therefore, ADUs would be less likely than other development types to involve impacts related to construction noise.
- **Mixed use development:** Mixed use development could range in size and scale from neighborhood commercial mixed use with smaller nonresidential uses, to high-rise mixed-use with larger nonresidential uses. Mixed use developments of any size would generate construction noise. However, large-scale mixed-use development projects would generate construction noise impacts considering that large mixed-use developments will presumably require greater excavation work, heavier equipment, and longer construction durations. Nonetheless, developers would be required to comply with LAMC regulations governing construction noise. As listed in Table 4-2, the Hollywood Center Project is a recent example of a mixed-use development in the City. The project includes the demolition of an existing building; preservation of the Capitol Records Complex; and construction of 1,005 residential units, comprising 872 market-rate and 133 senior affordable units, and up to 30,176 square feet of commercial uses, within four new mixed-use buildings on a 4.46-acre site. The EIR determined

that there were 13 noise sensitive uses within 500 feet of the project. The EIR used the 2006 City Threshold Guide of increases over 5 dBA of ambient at a noise sensitive receiver. The analysis determined that, similar to the Hollywood and Wilcox Project, construction noise levels associated with project development would exceed significance thresholds (i.e., standards established by the City) 11 of the sensitive receivers, with noise levels for some construction activities reaching up to 100 dB max for some receivers (Hollywood Center DEIR at IV.I-39.). Off-site construction impacts from construction traffic noise were also found to be potentially significant for one out of the 18 studied roadway segments having potential ambient noise increases of 5.4. The EIR identified three noise mitigation measures. These mitigation measures required that construction equipment be sited at least 100 feet from sensitive receivers or that natural or manmade barriers be implemented to screen receivers from equipment; the use of state-of-the-art noise shielding and silencing devices on power construction equipment; the prohibition of pile driving; and the noticing of receivers to construction activities and schedule at least two weeks prior to the start of construction. The analysis concluded that construction noise levels associated with project development would be reduced to the extent technically feasible but would still exceed significance thresholds at nearby receivers. Therefore, the analysis determined that this impact would remain significant and unavoidable, even with implementation of mitigation.

- **Conversion and/or rehabilitation:** Existing nonresidential, residential, and mixed-use structures could be converted or rehabilitated for new residential uses in areas throughout the City. The conversion or rehabilitation of existing properties, particularly small conversion projects (approximately two to 10 units) would generally not involve construction activities that would generate a substantial temporary increase in noise when compared to new construction on a vacant site; however, some development projects may involve both conversion/rehabilitation and new construction, such as the Crossroads Hollywood Project. As listed in Table 4-2, the Crossroads Hollywood Project is an example of a mixed-use development that involved the rehabilitation of the Crossroads of the World and former Hollywood Reporter building that included 950 residential units with hotel, commercial/retail, office, entertainment, and restaurant uses. The EIR for this project determined that, similar to the Hollywood and Wilcox Project and Hollywood Center Project, project construction would result in the exposure of persons to or generation of noise levels in excess of standards established by the LAMC or result in a substantial temporary increase in ambient noise levels at noise-sensitive uses surrounding the site above existing levels without the project. Therefore, Mitigation Measure I-1 was included to reduce construction noise to the extent feasible. This mitigation measure required that a temporary and impermeable sound barrier of adequate design be erected between the site and surrounding sensitive receivers. The analysis concluded that construction noise levels associated with project development would be reduced to the extent feasible at some receivers but other receivers would still be exposed to

significant levels of construction noise levels above thresholds. Therefore, construction noise impacts would remain significant and unavoidable, even with implementation of mitigation. Generally, conversion and/or rehabilitation projects would have less impacts than new multi-family or mixed-use development, and, depending on the type of conversion/rehabilitation project, noise impacts could be less than significant (e.g., interior rehabilitation with no ground disturbance).

As demonstrated above, construction noise is one of the more common reasons housing development in the City, especially larger projects, either require the preparation of an EIR or are found to have significant unavoidable impacts when compared to other impact areas studied under CEQA. The type of construction equipment, proximity of sensitive receivers to the site, and the overall duration of construction are key factors in determining whether construction-related noise would be significant. Based on construction noise levels shown in Table 4.10-10, the anticipated duration of construction activities, and type of equipment used for large housing developments, and the case studies above, the Housing Element Update would result in potentially significant construction noise impacts at nearby sensitive receivers. Without implementation of mitigation, future development facilitated by the project would result in a ***potentially significant*** impact related to construction noise.

Mitigation Measures

The following mitigation measures would apply to discretionary projects:

4.10-1(a) Noise Shielding and Silencing

Power construction equipment (including combustion engines), fixed or mobile, shall be equipped with noise shielding and silencing devices consistent with manufacturer's standards or the Best Available Control Technology. Equipment shall be properly maintained, and the Project Applicant or Owner shall require any construction contractor to keep documentation on-site during any earthwork or construction activities demonstrating that the equipment has been maintained in accordance with manufacturer's specifications.

4.10-1(b) Use of Driven Pile Systems

Driven (impact), sonic, or vibratory pile drivers shall not be used, except in locations where the underlying geology renders alternative methods infeasible, as determined by a soils or geotechnical engineer and documented in a soils report.

4.10-1(c) Enclosures and Screening

All outdoor mechanical equipment shall be enclosed or screened from off-site noise-sensitive uses. The equipment enclosure or screen shall be impermeable (i.e., solid material with minimum weight of 2

pounds per square feet) and break the line-of-sight from the equipment and off-site noise-sensitive uses.

4.10-1(d) Construction Staging Areas

Construction staging areas shall be located as far from noise-sensitive uses as reasonably possible and feasible in consideration of site boundaries, topography, intervening roads and uses, and operational constraints.

4.10-1(e) Temporary Sound Barriers

Sound barriers, such as temporary walls or sound blankets, shall be erected between construction activities and noise-sensitive uses when construction activities are located within a line-of-sight to and within 500 feet of noise-sensitive uses.

4.10-1(f) Project-Specific Construction Noise Study

A Construction Noise Study, prepared by a qualified noise expert to meet the requirements herein, shall be required for discretionary projects in the City located within 500 feet of noise-sensitive land uses and that have one or more of the following characteristics:

- Two or more subterranean levels or 20,000 cubic yards or more of excavated material;
- Construction duration (excluding architectural coatings) of 18 months or more;
- Use of large, heavy-duty equipment rated 300 horsepower or greater; or
- The potential for impact pile driving.

The Construction Noise Study shall characterize sources of construction noise, quantify noise levels at noise-sensitive uses (e.g., residences, transient lodgings, schools, libraries, churches [or other places of assembly], hospitals, nursing homes, auditoriums, concert halls, amphitheaters, playgrounds, and parks), and identify measures to reduce noise exposure. The Construction Noise Study shall identify reasonably available noise reduction devices or techniques to reduce noise levels to acceptable levels and/or durations including through reliance on any relevant federal, state or local standards or guidelines or accepted industry practices, and in compliance with LAMC standards. Noise reduction devices or techniques may include but not be limited to mufflers, shields, sound barriers, and time and place restrictions on equipment and activities. Each measure in the Construction Noise Study shall identify anticipated noise reductions at noise-sensitive land uses.

Project Applicants shall be required to comply with all requirements of Mitigation Measures 4.10-1(a) through 4.10-5(e) in addition to any additional requirements identified and recommended by the

Construction Noise Study and shall maintain proof that notice of, as well as compliance with, the identified measures have been included in contractor agreements.

Significance After Mitigation

Implementation of Mitigation Measures 4.10-1(a) through 4.10-1(f) would reduce construction noise to the extent feasible. However, noise generated by construction could still exceed the 75 dBA standard outlined by the LAMC Section 112.05. Because even with compliance with all City standards, sufficient reduction in construction noise levels cannot be assured for all construction projects, construction noise at various sensitive land uses could result in significant impacts. Therefore, the impact of construction noise on sensitive receivers in the vicinity of construction related to the Housing Element Update would remain ***significant and unavoidable***.

Impact 4.10-2	Would the Housing Element Update result in generation of a substantial 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 4.10-2 Housing development accommodated under the Housing Element Update could include mechanical equipment (i.e., HVAC), delivery and trash trucks, and other noise-generating activities. However, such activities would be typical of the urban environment. In addition, on-site activities would be required to comply with applicable RCMs and LAMC standards. Furthermore, while housing development would generate vehicle trips in the City, the increase in mobile noise would not result in a perceptible 3-dBA increase. Nonetheless, because sufficient reduction in operational noise levels cannot be assured for all projects, even with compliance with all City standards, operational noise at various sensitive land uses could result in significant impacts. Therefore, permanent noise increases due to operation of the Housing Element Update would be ***significant and unavoidable***.

Housing development accommodated under the Housing Element Update would include residential development at increased intensity and density throughout the City, particularly in High and Highest Resource Tracts, that would generate on-site operational noise from stationary sources and off-site operational noise from vehicle trips. Typical noise sources associated with residential uses include stationary HVAC equipment, on-site vehicle movement (e.g., delivery and trash hauling), outdoor activities, and off-site traffic.

HVAC Equipment

Based on manufacturer's specifications, a Carrier 38HDR060 split-system with a sound power level of 72 dBA would generate a noise level of approximately 57 dBA at a distance of seven feet. As shown in Table 4.10-6, City of Los Angeles Presumed Ambient Noise Levels, the presumed ambient noise level is 50 dBA during the daytime and 40 dBA during the nighttime for residential-zoned areas. Therefore, in the case where the actual ambient conditions are not known, noise from HVAC equipment could exceed the City's presumed ambient noise conditions when compared to a reference noise level 57 dBA at a distance of seven feet from the HVAC equipment source. However, noise levels from HVAC equipment associated with housing development would be comparable to noise levels of HVAC equipment associated with the existing urban environment. Furthermore, the design and placement of new HVAC equipment would be required to comply with RCM-NOI-4 (HVAC Noise), which prohibits noise from air conditioning, refrigeration, heating, pumping, and filtering equipment from exceeding the ambient noise level on the premises of other occupied properties by more than 5 dBA. On-site equipment would be typically designed such that it would be shielded by sound barriers that block the line-of-sight to sensitive receivers or it would include installation of appropriate noise-muffling devices to reduce noise. In addition, Section 112.04 prohibits the operation of any machinery equipment, or other mechanical or electrical device, which creates a loud, raucous or impulsive sound, within any residential zone or within 500 feet of any residence between 10:00 PM and 7:00 AM. The operation of HVAC equipment would have an anticipated less than significant noise impact.

Vehicle Activity (Delivery and Trash Hauling)

Future residential development would increase the number of delivery and trash hauling trucks traveling through the City to individual development sites. Increased delivery and trash hauling trucks could intermittently expose various sensitive receivers to increased truck noise. Section 23130 of the California Motor Vehicle Code establishes maximum sound levels of 86 dBA L_{eq} at 50 feet for trucks operating at speeds less than 35 miles per hour. While individual delivery truck and/or loading or trash pick-up operations would likely be audible at properties adjacent to individual development, such operations are already a common occurrence in the urban environment. In addition, these noise events from trucks are typically transient and intermittent, and do not occur for a sustained period of time. Therefore, the project would not result in a substantial permanent increase in ambient noise levels without the project. In addition, LAMC Section 113.01 prohibits rubbish and garbage collection within 200 feet of any residence between 9:00 PM and 6:00 AM, while LAMC Section 114.03 prohibits the loading or unloading of any vehicle, operation of any dollies, carts, forklifts, or other wheeled equipment, which causes any impulsive sound, raucous or unnecessary noise within 200 feet of any residence between 10:00 PM and 7:00 AM. Trash

and delivery trucks would be required to comply with LAMC standards and would be subject to state regulations, resulting in an anticipated less than significant impact.

Outdoor Activity Areas

Housing developments would generate noise from conversations, music, television, or other sound-generating equipment in the event future residents maintain open windows or such activities take place on balconies. However, these noise-generating activities would be similar to those of the existing urban environment. Noise from conversation would be an intermittent and temporary noise source, which would typically be limited to the daytime, outside of noise-sensitive hours of sleep. Moreover, LAMC Section 112.01 prohibits the operation of radios, musical instruments, television sets, and other sound-amplifying devices from being audible at a distance of 150 feet from the source within 500 feet of a residential zone or from exceeding the ambient noise level of any other property. In addition, for residential development with landscaped areas, LAMC Section 112.04, would prohibit use of landscaping equipment that creates nuisance noise during more sensitive hours between 10:00 PM and 7:00 AM. Required compliance with these standards and code enforcement of these standards would reduce operational noise impacts related to conversations and sound-generating equipment to an anticipated less than significant level.

Off-site Traffic

One of the objectives of the Housing Element Update includes promoting sustainable buildings and land use patterns that support a mix of uses, housing for various income levels (i.e., affordable housing), and provide access to jobs, amenities, services, and transportation options. Therefore, while the Housing Element Update would result in higher densities than existing conditions, this increase would be focused in areas around transit and services. Concentrating growth in existing urban areas and along transit corridors would generally reduce per capita VMT.

The overall increase in traffic noise from the project was estimated using VMT analysis prepared by Fehr & Peers for existing conditions (Year 2021), future without project conditions (i.e., Year 2029 without the Housing Element Update), and future with project conditions (i.e., Year 2029 with the Housing Element Update). These various daily VMT scenarios are shown in Table 4.10-11.

Table 4.10-11 Daily VMT Scenarios for the City

	Total Daily VMT[1]
Existing Conditions (2021)	133,113,557
2029 Without Housing Element Update[2]	139,381,030
2029 With Housing Element Update	138,345,651

[1] Total Daily VMT is the total VMT using the Origin-Destination method, which accounts for all VMT originating from or destined for the City of Los Angeles.

Source: FEHR & PEERS 2021

As shown in Table 4.10-11, daily VMT would increase by approximately four percent over existing 2021 conditions by the year 2029 under the Housing Element Update. A four percent increase in traffic on a roadway would equate to an increase of 0.2 dBA. Therefore, the project would not double the existing mobile noise source and would not increase noise levels by 3 CNEL within the "normally unacceptable" or "clearly unacceptable" categories (as shown in Table 4.10-7), or by 5 CNEL or more. Although a four percent or more increase in traffic may occur at local level in areas where substantial new housing is proposed, a doubling of traffic is still not anticipated to occur based on the citywide increase of four percent. Therefore, off-site traffic noise impacts would be an anticipated less than significant.

Impacts associated with the five different housing types under the Housing Element (i.e., multi-family residential development, single-family residential development, ADUs, mixed use development, and conversion and/or rehabilitation) are informed by a review of environmental assessments of housing development in the City (see Table 4-2 in Section 4, *Environmental Analysis*). A review of 54 housing development projects in the City, provided in Table 4-2, shows that significant and unavoidable noise impacts were associated with 18 large multi-family residential developments. However, impacts associated with project operation were all determined to be less than significant, except in the case of the Crossroads Hollywood Project, which included mitigation to reduce outdoor noise to a less than significant level. The following summaries discuss potential operation noise impacts of these project types and associated mitigation measures, if any.

- **Multi-family residential:** Multi-family residential projects may range in size from small apartment buildings with two to 10 units to larger apartment buildings and high-rise structures with hundreds of units. Multi-family developments of any size would generate operation noise. Small multi-family developments could be located in areas throughout the City; and, large multi-family development projects would primarily be located in Regional Centers and around transit. Additional multi-family developments of varying scales may also be accommodated in the High and Highest Resource Areas, as shown in Figure 3-5, as a result of the Rezoning Program. All projects would be required to comply with LAMC regulations governing operation noise. As listed in Table 4-2, the Hollywood and Wilcox

Project is an example of a multi-family development that involved the construction of 260 multi-family residential dwelling units, up to 10 percent (26 units) of which would be set aside for workforce housing and 17,800 square feet of commercial uses, comprising 11,020 square feet of retail, 3,580 square feet of office, and 3,200 square feet of restaurant uses. Specific operational noise sources addressed in the analysis included outdoor mechanical equipment (e.g., HVAC equipment), outdoor activities (e.g., courtyards, pool areas), parking facilities, loading/unloading activities, trash collections, and off-site mobile noise. The EIR analysis determined that, with compliance with existing LAMC standards, on-site noise sources would not result in exposure of persons to operational noise levels in excess of applicable City standards and impacts would be less than significant.

- **Single-family residential:** Single-family residential projects may range in size and scale from smaller or larger single-family homes, to small-lot or multi-lot single-family subdivisions. Like most residential development anticipated under the Housing Element Update, new single-family projects of varying scales (including small-lot subdivisions) would primarily be located in residential areas throughout the City. Nonetheless, single-family developments of any size would generate operational noise, but typically would not generate noise exceeding applicable thresholds. As listed in Table 4-2, an example of this development type is the Edinburgh Avenue SLS Project, which involved the demolition of the Bungalow Court and Garage and construction of a small lot subdivision consisting of eight, single-family residences. The EIR analysis determined that, while the project would increase ambient noise levels at noise-sensitive uses in the project area, such noise levels would be typical of the existing urban area and would not exceed noise thresholds established by the LAMC. No mitigation was required and the analysis concluded that impacts to operational noise from single-family residential development would be less than significant.
- **ADUs**: ADUs are created through a building addition or conversion of existing floor area and detached ADUs of various scales, which are allowed in any zone that allows for residential use as well as on any site that contains an existing residential use. An ADU would result in one or more additional units on a property containing existing or proposed residential units. Development of an ADU would be subject to LAMC standards governing operational noise and would not generate substantial sources of operational noise. Therefore, ADUs would be less likely than other development types to involve potentially impacts related to operational noise, as they typically only allow for modest increases in residential intensity on a given residential site.
- **Mixed use development:** Mixed use development could range in size and scale from neighborhood commercial mixed use with smaller nonresidential uses, to high-rise mixed-use with larger nonresidential uses. Mixed use developments of any size would generate operational noise. All projects would be required to comply with LAMC regulations governing operational noise. As listed in Table 4-2, the Hollywood Center Project is a recent example of a mixed-use development in the City. The

project includes the demolition of an existing building; preservation of the Capitol Records Complex; and construction of 1,005 residential units, comprised of 872 market-rate and 133 senior affordable units, and up to 30,176 square feet of commercial uses, within four new mixed-use buildings on a 4.46-acre site. The EIR analysis addressed on-site operational noise sources, such as fixed mechanical equipment (e.g., HVAC equipment), outdoor activities (e.g., plazas, decks, terraces), parking facilities, loading/unloading activities, trash collections, emergency generators, and off-site mobile noise under existing and future conditions. The analysis determined that, with compliance with existing LAMC standards, on-site noise sources would not result in exposure of persons to operational noise levels in excess of applicable City standards and impacts would be less than significant.

- **Conversion and/or rehabilitation:** Existing nonresidential, residential, and mixed-use structures could be converted or rehabilitated for new residential uses in areas throughout the City. However, considering the likelihood that these projects would redevelop properties already in operation, converted and/or rehabilitated properties would be less likely than other development types to involve potentially impacts related to operation noise when compared to ambient baseline noise levels. Furthermore, as with new housing development projects, projects involving conversion and/or rehabilitation of existing properties would be required to comply with LAMC regulations governing operational noise. With that said, projects that include both new development and conversions could result in impacts. The Crossroads project involved 29 parcels on four blocks in the Hollywood Community Plan Area. The project was to rehabilitate and preserve Crossroads of the World and demolish all other structures and build 950 residential units, 308 hotel rooms, 95,000 square feet of office uses, and 185,000 commercial retail uses. For operational impacts, the EIR analyzed mechanical equipment, outdoor spaces (including common open spaces, terraces, pool decks, outdoor sound system), parking facilities, loading dock and trash collection areas, and off-site mobile noise sources. In analyzing a composite of the various operational noise sources from the project, the EIR found that there could be potential impacts from ambient noise increases of up to 7.3 dBA at one sensitive receiver site, which would exceed the 5 dBA significance threshold for CNEL acceptable land use category, by 2.3 dBA. This exceedance was from the dominant noise source of outdoor spaces, specifically pool decks and roof decks associated with the project that operated until 2 a.m.; without outdoor space noise levels, the other operational noise sources for Crossroads (traffic, mechanical, parking, and loading/trash compactor) would have resulted in a noise level of 56.0 CNEL that would have been lower than the existing ambient noise level. The EIR identified a mitigation measure for a 12 foot high noise barrier to provide a 5 dBA reduction in ambient noise from the project to the sensitive receiver (a church). Impacts with the mitigation measure were still significant and unavoidable.

Overall, operation of housing development accommodated under the Housing Element Update would not generate sources of noise that are new or that would substantially alter the City's ambient noise

environment. On-site operational noise generated by the project would comply with applicable RCMs and LAMC standards. Furthermore, the increase in mobile noise associated with the Housing Element Update would not result in a perceptible 3-dBA increase. Nonetheless, the Crossroads project demonstrates that a large, mixed-use project with multiple outdoor space areas that includes pool and roof decks may result in a project with outdoor noise sources that exceed 3-dBA in a unacceptable land use category or 5 dBA in an acceptable land use category when compared to Table 4.10-7. Therefore, without implementation of mitigation, operational noise impacts would be ***potentially significant***.

Mitigation Measure

The following mitigation measure would apply to all discretionary projects involving a roof deck and/or pool deck.

4.10-2 Project-Specific Operational Noise Study

A Noise Study, prepared by a qualified noise expert to meet the requirements herein, shall be required for all discretionary housing developments with roof decks and/or pool decks in the City of Los Angeles concurrent with Design Review and prior to the approval of building permits. The Noise Study shall include:

- Description of pertinent noise regulations.
- Analysis of operational noise generated by the project's roof decks and/or pool decks to noise-sensitive land uses.
- Comparison of noise levels to applicable City thresholds, such as if the project's operational noise would exceed 3 dBA in an unacceptable land use category or 5 dBA in an acceptable land use category per the City's land use compatibility guidelines included in the City of Los Angeles General Plan Noise Element.
- If project noise would exceed City thresholds, identification of mitigation measures to reduce noise to below 3dBA in an unacceptable land use category or 5 dBA in an acceptable land use category to the extent feasible. Mitigation measures may include, but would not be limited to, operational restrictions, sound dampening equipment, or sound walls.
- Each mitigation measure in the Noise Study shall identify anticipated noise reductions at noise-sensitive land uses.
- Applicant/owners shall comply with the mitigation plan and include the measures in construction contracts.

Significance After Mitigation

In combination with existing LAMC standards, implementation of Mitigation Measure 4.10-2 would reduce on-site operational noise to the extent feasible. Because even with compliance with all City standards, sufficient reduction in operational noise levels cannot be assured for all projects, operational noise at various sensitive land uses could result in significant impacts. Therefore, the impact of operational noise on sensitive receivers in the vicinity of construction related to the Housing Element Update would remain ***significant and unavoidable***.

Threshold 4.10-3	Would the Housing Element Update result in generation of excessive groundborne vibration or groundborne noise levels?

Impact 4.10-3 Housing development accommodated under the Housing Element Update is not anticipated to involve operational activities that would result in substantial vibration levels (e.g., use of heavy equipment). However, construction activities under the Housing Element Update, specifically pile driving, could potentially generate vibration exceeding thresholds for buildings susceptible to damage (e.g., historic structures). Although mitigation is available to minimize the potential effects of vibration, it cannot be assured that construction-related vibration would not result in building damage or human annoyance. Therefore, impacts generated by construction vibration would be ***significant and unavoidable***.

Construction activities associated with housing development accommodated by the Housing Element Update would result in varying degrees of groundborne vibration depending on the equipment and methods employed. Operation of construction equipment causes vibration that spreads through the ground and diminishes in strength with distance. Buildings with foundations in the soil in the vicinity of a construction site respond to these vibrations with varying results ranging from no perceptible effects at the lowest levels, low rumbling sounds and perceptible vibrations at moderate levels, and slight damage at the highest levels. Construction vibration is a localized event and is typically only perceptible to a receiver that is in close proximity to the vibration source. High-rise residential buildings and development on sites with certain geologic conditions may require heavy equipment, including pile driving. Such heavy equipment could potentially operate within 25 feet of nearby buildings. As shown in Table 4.10-12, construction equipment would typically generate vibration levels up to 0.21 in./sec. PPV (i.e., vibratory roller) at 25 feet, although pile driving could generate a vibration level of approximately 0.64 in./sec. PPV at 25 feet. Vibration levels shown in bolded and underlined text exceed one or more of the Caltrans criteria shown in Table 4.10-4 and Table 4.10-5.

Table 4.10-12 Approximate Vibration Levels Generated By Construction Equipment

Equipment	PPV (in./sec.)			
	25 Feet	50 Feet	75 Feet	100 Feet
Pile Driver (Impact)	**0.644**[1,2,3,5]	**0.300**[1,5]	**0.192**[1]	**0.140**[1]
Pile Driver (Sonic)	**0.170**[1]	0.079	0.051	0.037
Vibratory Roller	**0.210**[1]	0.098	0.063	0.046
Hoe Ram	0.089	0.042	0.027	0.019
Large Bulldozer	0.089	0.042	0.027	0.019
Caisson Drilling	0.089	0.042	0.027	0.019
Loaded Truck	0.076	0.036	0.023	0.017
Jackhammer	0.035	0.016	0.011	0.008
Small Bulldozer	0.003	0.001	<0.001	<0.001

Vibration levels shown in bolded and underlined text exceed one or more of the Caltrans criteria shown in Table 4.10-4 and Table 4.10-5. Superscripts specify the threshold exceeded by each piece of equipment.

[1] Exceeds the 0.1 in./sec. Caltrans damage threshold for historic sites (and other critical locations).

[2] Exceeds the 0.5 in./sec. Caltrans damage threshold for historic and other/similar old buildings.

[3] Exceeds the 0.5 in./sec. Caltrans damage threshold for older residential structures.

[4] Exceeds the 1.0 in./sec. Caltrans damage threshold for newer residential structures.

[5] Exceeds the 0.25 in./sec. Caltrans human annoyance threshold.

Sources: FTA 2018; Caltrans 2020

According to Caltrans impact criteria shown in Table 4.10-4, the damage threshold for historic sites (which are most sensitive to impacts from groundborne vibration) is 0.1 in./sec. PPV. Groundborne vibration from hoe rams, bulldozers, caisson drilling, loaded trucks, and jackhammers would not exceed the 0.1 in./sec. PPV threshold for sensitive historic sites. While groundborne vibration from vibratory rollers would only exceed the threshold for building damage for historic sites at 25 feet from the source, vibration levels from pile driving would exceed one or more of the building damage thresholds for historic sites, general old buildings, and older and newer residential structures when compared to the Caltrans impact criteria shown in Table 4.10-4. Furthermore, vibration levels of pile driving would also exceed the threshold of 0.25 in./sec. PPV for human annoyance at various distances, as shown in Table 4.10-12. As discussed in Section 4.4, *Cultural Resources*, data available through the National Register of Historic Places (NRHP) identifies approximately 220 resources listed at the national and state levels and the City has designated more than 1,100 Historic-Cultural Monuments (HCMs) in the City, which would all be susceptible to potential groundborne vibration damage. Therefore, new residential development accommodated under the Housing Element Update would result in a ***potentially significant*** impact related to construction vibration without implementation of mitigation.

It is not anticipated that operation of housing development would involve activities that would result in substantial vibration levels, such as use of heavy equipment. Operational groundborne vibration in the

vicinity of development associated with the Housing Element Update would be primarily generated by vehicular travel on the local roadways. According to the FTA *Transit Noise and Vibration Impact Assessment* (2018) guidance document, rubber tires and suspension systems dampen vibration levels from trucks to a level that is rarely perceptible. Therefore, traffic vibration levels even with the expected additional trips from the Housing Element Update would not be perceptible by sensitive receivers. Therefore, impacts related to operational vibration would be ***less than significant***.

The case studies discussed below support these impact conclusions for construction and operational vibration impacts.

Impacts associated with the five different housing types under the Housing Element (i.e., multi-family residential development, single-family residential development, ADUs, mixed use development, and conversion and/or rehabilitation) are informed by a review of environmental assessments of housing development in the City (see Table 4-2 in Section 4, *Environmental Analysis*). A review of 54 housing development projects in the City, provided in Table 4-2, shows that significant and unavoidable noise impacts were associated with 18 large multi-family residential developments. Of the 18 identified projects, 14 analyses determined that project construction would result in significant and unavoidable impacts related to construction vibration, even with mitigation. The following summaries discuss potential vibration impacts of these project types and associated mitigation measures, if any.

- **Multi-family residential:** Multi-family residential projects may range in size from small apartment buildings with two to 10 units to larger apartment buildings and high-rise structures with hundreds of units. Multi-family developments of any size would generate construction noise. Small multi-family developments could be located in areas throughout the City; and, large multi-family development projects would primarily be located in Regional Centers and around transit. Additional multi-family developments of varying scales may also be accommodated in the High and Highest Resource Areas, as shown in Figure 3-5, as a result of the Rezoning Program. As listed in Table 4-2, Hollywood and Wilcox Project is an example of a multi-family development that incorporated measures to reduce construction vibration at off-site uses. The project involved the construction of 260 multi-family residential dwelling units, up to 10 percent (26 units) of which would be set aside for workforce housing and 17,800 square feet of commercial uses, comprised of 11,020 square feet of retail, 3,580 square feet of office, and 3,200 square feet of restaurant uses. The analysis determined that estimated vibration levels from project construction would exceed the applicable PPV thresholds for building damage and human annoyance, and, therefore, included Mitigation Measure NOI-MM-2. This mitigation measure required that the project applicant inspect and document existing structural conditions at the receiver building to establish baseline conditions; develop and implement a vibration monitoring program capable of documenting construction-related vibration levels at the receiver building; and repair any

damage caused to the receiver building from construction vibration. However, due to the infeasibility of restricting construction equipment within 25 feet of buildings and human receivers, the analysis concluded that impacts associated with construction vibration would remain significant and unavoidable, even with implementation of mitigation.

- **Single-family residential:** Single-family residential projects may range in size and scale from smaller or larger single-family homes, to small-lot or multi-lot single-family subdivisions. Like most residential development anticipated under the Housing Element Update, new single-family projects of varying scales (including small-lot subdivisions) would primarily be located in residential areas throughout the City. As listed in Table 4-2, an example of this development type is the Edinburgh Avenue SLS Project, which involved the demolition of the Bungalow Court and Garage and construction of a small lot subdivision consisting of eight, single-family residences, over the course of a 12-month construction schedule. The EIR analysis determined that construction vibration levels associated with project development would not exceed significance thresholds for building damage at surrounding structures but would generate potential significant impacts related to human annoyance. However, with implementation of MM-NOISE-2, which prohibited the operation of high-vibration construction equipment (e.g., large bulldozers and loaded trucks) within 45 feet of residences, the analysis determined that vibration levels associated with project development would be reduced to a less than significant level.
- **ADUs**: ADUs are created through a building addition or conversion of existing floor area and detached ADUs of various scales, which are allowed in any zone that allows for residential use as well as on any site that contains an existing residential use. An ADU would result in one or more additional units on a property with existing or proposed residential units. While development of an ADU would still be subject to LAMC standards governing construction hours, such activities would typically require less intensive equipment and would involve a quicker turnaround to completion. Therefore, ADUs would be less likely than other development types to involve impacts related to construction vibration and would not generate operational vibration.
- **Mixed use development:** Mixed use development could range in size and scale from neighborhood commercial mixed use with smaller nonresidential uses, to high-rise mixed-use with larger nonresidential uses. Mixed use developments of any size would generate vibration from construction activities. As listed in Table 4-2, the Hollywood Center Project is a recent example of a mixed-use development in the City. The project includes the demolition of an existing building; preservation of the Capitol Records Complex; and construction of 1,005 residential units, comprised of 872 market-rate and 133 senior affordable units, and up to 30,176 square feet of commercial uses, within four new mixed-use buildings on a 4.46-acre site. The analysis determined that construction vibration levels associated with project development would exceed significance thresholds for building damage and

human annoyance at surrounding receivers. Operational vibration levels were determined to be less than significant since the mixed-use project would not involve use of heavy equipment. The project included Mitigation Measure NOI-MM-4, which required the project applicant to inspect and document existing structural conditions at the receiver buildings to establish baseline conditions; develop and implement a vibration monitoring program capable of documenting construction-related vibration levels at the receiver buildings; and repair any damage caused to receiver buildings from construction vibration. However, while implementation of Mitigation Measure NOI-MM-4 could reduce impacts from vibration to less than significant levels, because Mitigation Measure NOI-MM-4 requires the consent of other property owners, who may not agree, the analysis conservatively concluded that vibration impacts would remain significant and unavoidable because it cannot be assured that all components of the measure can be implemented.

- **Conversion and/or rehabilitation:** Existing nonresidential, residential, and mixed-use structures could be converted or rehabilitated for new residential uses in areas throughout the City. The conversion or rehabilitation of existing properties, particularly small conversion projects (approximately two to 10 units) would generally not involve construction activities that would generate a substantial temporary increase in vibration when compared to new construction on a vacant site; however, some development projects may involve both conversion/rehabilitation and new construction, such as the Crossroads Hollywood Project. As listed in Table 4-2, the Crossroads Hollywood Project is an example of a mixed-use development that involved the rehabilitation of the Crossroads of the World and former Hollywood Reporter building and new construction, and included 950 residential units with hotel, commercial/retail, office, entertainment, and restaurant uses. The EIR for this project determined that, similar to the Hollywood and Wilcox Project and Hollywood Center Project, project construction would result in vibration levels in exceedance of significance thresholds for building damage at and human annoyance at surrounding receivers. Therefore, Mitigation Measure I-2 required that the project applicant inspect and document existing structural conditions at the receiver buildings to establish baseline conditions; develop and implement a vibration monitoring program capable of documenting construction-related vibration levels at the receiver buildings; and repair any damage caused to receiver buildings from construction vibration. reduce construction noise to the extent feasible. The analysis concluded that Mitigation Measure I-2 would reduce potential vibration impacts related to building damage to a less than significant level. After considering a wave barrier (i.e., trench or a thin wall made of sheet piles installed in the ground) to reduce impact related to human annoyance, the analysis determined that installation of such a barrier would, in and of itself, generate groundborne vibration from excavation equipment. Therefore, receivers would still be exposed to potentially significant levels of vibration and impacts would remain significant and unavoidable, even with implementation of mitigation.

Mitigation Measures

The following mitigation measures address potentially significant impacts related to construction vibration in the vicinity of buildings susceptible to building damage (e.g., historic structures).

4.10-3(a) Vibration Control Plan

For construction activity for discretionary projects involving vibratory rollers or sonic pile drivers within 50 feet of an extremely fragile building (non-engineered masonry) or historical resource (designated or in SurveyLA or other City recognized survey), the Applicant shall prepare a Vibration Control Plan. The Vibration Control Plan requirement shall also apply to use of impact pile drivers within 140 feet of extremely fragile buildings or historical resources or residential structures. The Vibration Control Plan shall be prepared by a licensed structural engineer and shall include methods to minimize vibration, including, but not limited to:

- Use of drilled piles or similar method rather than impact pile driving
- Use of rubber-tired equipment rather than metal-tracked equipment
- Avoiding the use of vibrating equipment when allowed by best engineering practices

The Vibration Control Plan shall include a pre-construction survey letter establishing baseline conditions at potentially affected extremely fragile buildings/historical resources. The survey letter shall provide a shoring design to protect the extremely fragile buildings/historical resources from potential damage. At the conclusion of vibration causing activities, the qualified structural engineer shall issue a follow-up letter describing damage, if any, to impacted buildings. The letter shall include recommendations for any repair, as may be necessary, in conformance with the Secretary of the Interior Standards. Repairs shall be undertaken and completed by the Contractor and monitored by a qualified structural engineer in conformance with all applicable codes including the California Historical Building Code (Part 8 of Title 24).

A Statement of Compliance signed by the Applicant and Owner is required to be submitted to the Los Angeles Department of Building and Safety (LADBS) at plan check and prior to the issuance of any permit. The Vibration Control Plan, prepared as outlined above shall be documented by a qualified structural engineer, and shall be provided to the City upon request.

4.10-3(b) Vibration Mitigation

For all discretionary projects:

- Impact pile drivers shall be avoided to eliminate excessive vibration levels. Drilled piles or similar methods are alternatives that shall be utilized where geological conditions permit their use.
- Construction activities shall involve rubber-tired equipment rather than metal-tracked equipment.
- The construction contractor shall manage construction phasing (scheduling demolition, earthmoving, and ground-impacting operations so as not to occur in the same time period), use low-impact construction technologies, and shall avoid the use of vibrating equipment when allowed by best engineering practices.

Significance After Mitigation

Although most construction activities located in the City are not anticipated to have significant vibration impacts, it is possible that some development projects under the Housing Element Update could have significant vibration impacts during construction. This would most commonly occur when a development project would be located next to a historical resource constructed of fragile building materials, which is more sensitive to vibration damage, than structures that were built based on more recent building codes. Mitigation Measure 4.10-3(a) would reduce vibration impacts whenever a development project is located near a historical resource constructed of fragile materials, or if impact pile driving is proposed near residential structures. It is anticipated that Mitigation Measure 4.10-3(a) would substantially reduce/control construction but may not be able to fully avoid vibration that would damage a historical resource or a building of fragile construction. In addition, Mitigation Measure 4.10-3(b) would limit vibration levels at uses other than historic properties. However, it may not be feasible for all projects to comply with all measures, including fully eliminating pile driving. Nevertheless, it is conservatively assessed that construction vibration levels at certain particularly fragile adjacent buildings could exceed the thresholds of significance and result in building damage. Therefore, the projects' construction-related vibration impact would remain ***significant and unavoidable***.

Threshold 4.10.4	For a project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the Housing Element Update expose people residing or working in the project area to excessive noise levels?

Impact 4.10-4 Housing developments accommodated under the Housing Element Update could be exposed to intermittent noise levels from overhead flight patterns from several airports in the City or its vicinity. While the project would not emphasize building housing in the immediate vicinity of airports, all residential development would, nonetheless, be required to incorporate noise insulation features per State and local standards to reduce interior noise levels to below 45 dBA. The impact of airport or airstrip operations on new development would be ***less than significant***.

Based on the locations of residential zoning and land use as shown in Figure 3-3 and Figure 3-4, respectively, in Section 3, *Project Description*, as well as the locations of High and Highest Resource Tracts that would be prioritized through the Rezoning Program, as shown in Figure 3-5 in Section 3, *Project Description*, housing development accommodated by the Housing Element Update could be proposed within two miles of an airport, namely the Los Angeles International Airport, Santa Monica Airport, and Van Nuys Airport, or within these airports' influence areas. However, the Housing Element Update would not increase air traffic or associated noise from aircraft overflights. Furthermore, the types of housing units under the Housing Element Update (i.e., multi-family residential development, single-family residential development, ADUs, mixed use development, and conversion and/or rehabilitation) would all be subject to existing ALUC policies and regulations governing exposure to noise levels from airport operations. This includes, but is not limited to, adherence to the CBC, Title 24, Part 2, Section 1206.4 (Allowable Interior Noise Levels) of the California Code of Regulations; the City's General Plan Noise Element; and LAMC Subsections 91.1206.14.1 and 91.1206.14.2, which requires new sensitive uses to achieve an interior noise level of 45 dBA or less in any habitable room. Furthermore, according to LAMC Subsection 91.1206.14.3, structures that are exposed to airport noise greater than 60 CNEL, shall require an acoustical analysis showing that the proposed design will achieve the allowable interior noise level in habitable rooms. Since the Housing Element Update would not increase air traffic operations and because all development would be subject to the same ALUC standards for noise exposure, an individual analysis for the five housing types accommodated under the Housing Element Update is not warranted. While residents of housing developments accommodated under the Housing Element Update may be subject to occasional overhead flight noise, the Housing Element Update would not lead to excessive noise or safety hazards as it relates to airports. This impact would be ***less than significant***.

Mitigation Measures

No significant impacts have been identified; therefore, mitigation is not required for housing development accommodated under the Housing Element Update. Individual future development would need to incorporate sound attenuating features to achieve acceptable interior noise levels to comply with CBC, Title 24, Part 2, Section 1206.4 of the California Code of Regulations; the City's General Plan Noise Element; and LAMC Subsections 91.1206.14., 91.1206.14.2, and 91.1206.14.3.

Cumulative Impacts

The geographic extent of cumulative analysis for the Housing Element Update is the entire City of Los Angeles, consistent with the impact analysis provided above. Cumulative impacts may occur if impacts of the Proposed Project combine with similar impacts of other projects in the cumulative scenario. In this case, the Proposed Project is the Housing Element Update, inclusive of all future development projects that may occur under the Housing Element Update. Therefore, the cumulative scenario is not comprised of other Housing Element Update projects (which collectively constitute the Proposed Project), but rather of projects unrelated to the Housing Element Update that could result in similar noise and vibration impacts as projects under the Housing Element Update. As such, cumulative noise and vibration impacts could occur if such impacts from development projects under the Housing Element Update combine with similar impacts of other development (e.g., nonresidential, past residential) projects throughout the geographic extent of analysis, which is defined as the City of Los Angeles.

Construction Noise

Construction of future development projects in the City would produce temporary noise impacts that would be localized to a project site and sensitive receivers within the immediate vicinity. Therefore, only sensitive receivers located in close proximity to each construction site would be potentially affected by each activity. Nonetheless, construction activities associated with individual housing development projects accommodated under the Housing Element Update may overlap for some time with construction activities for other development projects. Typically, if a development site is 500 feet or more away from another site then noise levels would have attenuated to a point that they would not combine to produce a cumulative noise impact. Therefore, construction noise levels would typically become cumulative only if two development sites were to have construction occurring within 500 feet of each other.

Construction activities associated with future development are subject to the City's established RCMs, which include RCM-NOI-1 (LAMC Noise Ordinances), RCM-NOI-2 (Construction Hours), and RCM-NOI-3 (Construction Site Notice). Nonetheless larger or more unusual projects could result in significant short-term increases in noise levels. These projects could combine together, or combine with smaller projects, to substantially increase noise levels at specific noise-sensitive receivers. Therefore, the significant and

unavoidable construction noise impacts of the Housing Element Update could add to construction noise impacts associated with cumulative development, especially on the periphery of the City where receivers could be exposed to noise sources from within and outside the City. The incremental effect of the Housing Element Update would be cumulatively considerable and temporary construction noise impacts would remain ***significant and unavoidable***.

On-site Operational Noise

On-site operational noise impacts are localized to an individual development site and sensitive receivers within the immediate vicinity. Future development in the City would include mechanical equipment, loading, trash pick-up, and other noise-generating activities. However, such activities would be typical of the urban environment in the City and on-site activities would be required to comply with applicable provisions of the LAMC and RCM-NOI-4 (HVAC Noise). However, even with compliance with all City standards, sufficient reduction in operational noise levels cannot be assured for all projects, particularly in a cumulative scenario. Therefore, the impact of cumulative operational noise on sensitive receivers in the vicinity of construction related to the Housing Element Update would remain ***significant and unavoidable***.

Off-site Traffic Noise

Cumulative development through the year 2029 would generate vehicle trips, thereby increasing traffic on area roadways. As shown in Table 4.10-11, future daily VMT levels by the year 2029 with future development from the Housing Element Update, which accounts for all cumulative development in the region, would not double existing VMT levels or increase mobile noise by more than 3 dBA. Therefore, the effect of the Housing Element Update on off-site traffic noise would not be cumulatively considerable and cumulative impacts would be ***less than significant***.

Groundborne Vibration

Construction of future development projects in the City would produce temporary vibration impacts that would be localized to a project site and sensitive receivers in the immediate vicinity. Therefore, only sensitive receivers located in close proximity to each construction site would be potentially affected by each individual activity. Nonetheless, construction activities associated with individual housing development projects from the Housing Element Update may overlap for some time with construction activities for other development projects. For the combined vibration impact from simultaneous construction projects to reach cumulatively significant levels, intense construction from these projects would have to occur simultaneously in close proximity to a sensitive receiver. Therefore, the significant and unavoidable construction vibration impacts of the Housing Element Update could add to vibration impacts associated with cumulative development within the City or on its peripheries. The incremental effect of the Housing

Element Update would be cumulatively considerable and temporary construction vibration impacts would remain ***significant and unavoidable***.

Operational groundborne vibration impacts are localized to a project site and sensitive receivers within the immediate vicinity. However, it is not anticipated that new residential development within the City would include substantial sources of operational ground-borne vibration. Therefore, cumulative impacts related to operational ground-borne noise and vibration at any sensitive receiver would not be significant. Impacts related to operational groundborne vibration would not be cumulatively considerable and cumulative impacts would be ***less than significant***.

Airport Noise

Aircraft-related noise impacts occur only in the vicinity of airports or airstrips. Although citywide growth could increase the number of people who are exposed to aircraft-related noise impacts, such impacts would be localized in nature. In addition, new residential development would not result in a direct increase to aircraft operations that would increase noise exposure to aircraft overflight patterns within and outside the City. The Housing Element Update would have no contribution to any cumulative impact related to airport hazards or noise. Impacts related to airport or airstrip noise would not be cumulatively considerable and cumulative impacts would be ***less than significant***.

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4.11 POPULATION AND HOUSING

This section analyzes the potential effects of the Housing Element Update to inducing substantial population growth and analyzes the potential effects of the Safety Element Update with respect to population displacement. Potential growth-inducing impacts of the Proposed Project are further addressed in Section 5, *Other CEQA Considerations.*

4.11.1 ENVIRONMENTAL SETTING

Existing Conditions

The City of Los Angeles encompasses approximately 467 square miles and is divided into 35 Community Plan Areas (CPA),[1] which include a mix of commercial, retail, residential development, civic, public facility, entertainment, and industrial uses. Figure 3-2 in Section 3, *Project Description*, illustrates the CPA boundaries.

Population

Population estimates and forecasts are prepared by a variety of expert sources, and there is not one definitive source; however, the analysis included in this EIR is based on data prepared by SCAG as they are the regional municipal planning organization and are responsible for producing socio-economic estimates and projections at multiple geographic levels within the SCAG region. The socio-economic estimates and projections are used for state mandated long-range planning efforts, such as the RTP/SCS. Every four years, SCAG prepares socioeconomic projections that are used by various City departments and agencies for their long-range planning efforts. These projections are derived from a combination of sources and consider factors such as birth rates, migration rates, historical trends, household size, market and economic projections, existing and planned land uses, and consistency with relevant adopted local, regional and state land use policies and growth strategies. The Los Angeles Department of City Planning allocates the City's projected population to the City's 35 Community Plan Areas consistent with the City's General Plan Framework Element and other City policies, and the SCS policies, which call for directing growth to regional, commercial and transit centers. The City then accommodates the projected levels of population and housing through its Community Plan updates. Currently, the City is updating 15 Community Plans: Hollywood, Downtown Los Angeles (Central City and Central City North), Boyle Heights, Canoga Park - Winnetka - Woodland Hills - West Hills, Encino-Tarzana, Reseda-West Van Nuys

[1] The Draft Downtown Community Plan not yet adopted at the time of preparation of this Draft EIR proposes to combine the Central City Community Plan Area and the Central City North Community Plan Area, reducing the City's Community Plan Areas to 34.

North Hollywood - Valley Village, Sherman Oaks - Studio City - Toluca Lake - Cahuenga Pass, Van Nuys - North Sherman Oaks, West Los Angeles, Westchester-Playa Del Rey, Venice, Palms-Mar Vista-Del Rey, Harbor Gateway, and Wilmington - Harbor City. With implementation of the updated Community Plans, the land use designations, intensities, and densities of each area would be updated to accommodate population growth and housing demand projected by SCAG through the year 2040 and/or 2045.

As discussed in Section 4.2, *Air Quality*, the Southern California Association of Government's (SCAG) 2020-2045 Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS), fully adopted on September 3, 2020 and also known as Connect SoCal, is a regional planning document that was developed through a four-year planning process to update population, housing, and employment data as well as transportation strategies for the region through the horizon year of 2045. As an update to the previous 2016-2040 RTP/SCS, the 2020-2045 RTP/SCS reports the final 2016 regional and jurisdiction-level demographic (i.e., population, housing, and employment) estimates and 2045 demographic forecasts. As reported in the 2020-2045 RTP/SCS, the City had a population of 3,933,800 in 2016 and has a jurisdiction-level growth forecast of 4,771,300 persons for the year 2045 (SCAG 2020). As the Housing Element Update is an eight-year plan for the years 2021-2029, it is expected based on the 2020-2045 RTP/SCS forecast that Los Angeles will have a population of approximately 4,309,231 at the plan horizon of the Housing Element Update in 2029.

Aside from the RTP/SCS, there are a number of available sources that provide population estimates and forecasts, which are provided here for informational context. The U.S. Census Bureau conducts the decennial census of population and housing every ten years, which represents the official count of the population based on a point in time. The Census Bureau also conducts the American Community Survey (ACS), which is a statistically valid survey which occurs on a monthly basis each year. The results of the ACS are used to create population estimates based on the 5-year average and the 1-year average. There are some differences in the methodology used to conduct the decennial census and the ACS.[2] According to the ACS 5-Year average, the City has a population of 3,966,936 in 2019, and according to the ACS 1-Year average, the City has a population of 3,979,537 in 2019.[3]

The most recent decennial census was conducted in 2020; however, detailed results are not expected to be available until late September 2021 and are not available at the time of preparation of this EIR. There are several early indicators which suggest that the 2020 Census results may show a lower population count for the City of Los Angeles, compared to other existing data forecasts (such as the RTP/SCS and the ACS).[4]

[2] The U.S. Census Bureau has published a summary sheet explaining some of these key differences, available here: https://www.census.gov/content/dam/Census/library/publications/2020/acs/acs_general_handbook_2020_ch09.pdf

3 The 2020 ACS was not yet available at the time of the preparation of this EIR.

4 Early Census results show that population growth slowed in the State of California in the last decade, to 6.1% (2010-2020), compared to a 10% growth rate in the prior decade.

This will likely be due to a number of factors, including the fact that the decennial census was conducted during the COVID-19 pandemic, a period during which it was difficult to conduct census-related outreach to ensure full participation of hard-to-reach populations. Demographers have also noted a trend of declining birth rates and migration rates that point to a potential decline in overall population. In addition, it is not clear to what extent the results will be impacted by the Trump Administration's efforts to include a citizenship status question on the 2020 Census, a question that was ultimately not included but its consideration may have affected census participation rates.

According to the California Department of Finance's (DOF) January 2021 population estimate for the City of Los Angeles, the City currently has a population of approximately 3,923,341 residents (DOF 2021).

Housing and Households

According to the City of Los Angeles' 2013-2021 Housing Element, residential land use was the largest land use by total land area, comprising 56 percent of the City (approximately 44 percent of the land uses are comprised of single-family residences and the remaining 12 percent are comprised of multi-family residences) (City of Los Angeles 2013). Zoning in the City is generally cumulative, allowing for a variety of housing types and densities in the City's various zoning districts (City of Los Angeles 2013). According to the ACS 5-Year average, the City had a total of 1,493,108 housing units as of 2019. ACS methodology reports on the estimated number of housing units while SCAG methodology utilizes households (occupied housing units) for estimates and future forecasts.

As reported in the 2020-2045 RTP/SCS, the City had 1,367,000 households (occupied housing units) in 2016 and has a jurisdiction-level forecast of a total of 1,793,000 households for the year 2045 (SCAG 2020), a projected increase of 426,000 households between 2016 and 2045. Based on this forecast, it is expected that Los Angeles will have approximately 1,557,966 households at the completion of the project at the 2029 horizon.

Table 4.11-1 below provides a comparison of the City's demographics for 2012 and 2016 as reported in SCAG's 2016-2040 and 2020-2045 RTP/SCS, respectively, as well as the net growth and percent change between 2012 and 2016. Following SCAG's analysis pattern for each iteration of the RTP/SCS, the 2020-2045 RTP/SCS reports the final 2016 regional and jurisdiction-level demographic estimates as an update to the previous 2012-2040 RTP/SCS.

Table 4.11-1 Comparison of SCAG's 2008 and 2016 Citywide Demographics for the City of Los Angeles

	2016-2040 RTP/SCS (Year 2012)	2020-2045 RTP/SCS (Year 2016)	Net Growth (2020 RTP/SCS – 2016 RTP/SCS)	Percent Change (2020 RTP/SCS – 2016 RTP/SCS)
Population	3,845,500	3,933,800	88,300	2.3%
Households	1,325,500	1,367,000	41,500	3.1%
Source: SCAG 2016; SCAG 2020B				

As shown in Table 4.11-1 and based on data reported by SCAG, the City's population increased from approximately 3,845,500 residents in 2012 to 3,933,800 residents in 2016, resulting in a net population growth of approximately 88,300 residents, or approximately 2.3 percent. Furthermore, citywide households increased from approximately 1,325,500 in 2012 to 1,367,000 in 2016, resulting in a net increase of approximately 41,500 households, or approximately 3.1 percent (SCAG 2016; SCAG 2020b).

4.11.2 REGULATORY FRAMEWORK

There are several plans, policies, and programs regarding population and housing at the State, regional, and local levels.

State

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.

California Housing Accountability Act

The Housing Accountability Act (HAA; SB 167) is a California state law designed to promote infill development by speeding housing approvals. The HAA was passed in 1982 in recognition that the lack of housing, including emergency shelter, is a critical statewide problem. The HAA empowers the State of California to limit the ability of local government to restrict the development of new housing.

Housing Element Law: California Government Code Section 65583 and 65584(a)(1)

Section 65583 of the California Government Code requires cities and counties to prepare a housing element, as one of the 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), 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 (RHNA) determination. To date, there have been five previous housing element update "cycles." California is now in its sixth "housing-element update cycle." The SCAG RHNA and the City's General Plan Housing Element are discussed further below. The Proposed Project is intended to meet the requirement to prepare a 6th cycle housing element update as further discussed and explained in Section 3, *Project Description*.

Senate Bill 2

California SB 2, adopted in 2007 and effective January 2008, amended the HAA and the State Housing Element Law to require local governments to take specific zoning actions to encourage the development of emergency shelters and transitional and supportive housing. It also clarifies that under the HAA, a jurisdiction cannot deny applications for such types of housing and shelter without making specific evidence-based findings.

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 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 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 2020-2045 RTP/SCS, also known as Connect SoCal, which is an update to the previous 2016-2040 RTP/SCS (SCAG 2020a). 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 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 also prohibits the demolition of housing units unless an equal number of housing units will be created. The bill also provides a number of tenant protections, such as relocation benefits, right of return and replacement housing for units protected for affordable housing and rent-controlled units. 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.

The Mello Act

In 1982, the State of California adopted the Mello Act (Government Code Sections 65590 - 65590.1) to preserve and increase the overall number of residential dwelling units and affordable dwelling units within the California Coastal Zone. The Mello Act prohibits the removal of residential dwelling units for non-coastal dependent or non-coastal related uses, requires that affected existing affordable dwelling units be replaced, and that additional new affordable dwelling units be incorporated into projects, both where feasible. Provisions of the law allow for the replacement of new affordable dwelling units on-site, within the Coastal Zone, or within three miles inland of the coastal zone, as well as in-lieu fee payments.

Density Bonus Incentives (Government Code Section 65915)

The State Density Bonus law (signed into law in 1979) requires jurisdictions to provide applicants with a density bonus and incentives or concessions for the production of housing development in which affordable housing is also provided. Eligible projects include housing developments with (1) at least 10 percent housing for lower income households; (2) at least five percent of the housing for very low-income households; (3) a senior citizen housing development or mobile home park restricted to older persons; and (4) at least 10 percent of the total dwelling units in common interest development for moderate-income families or persons. AB 1763, effective January 1, 2020, amends the State Density Bonus Law (Section 65915) to allow for taller and denser 100 percent affordable housing developments, especially those near transit, through the creation of an enhanced affordable housing density bonus.

Relocation Assistance: California Government Code Section 7261(a)

Section 7261(a) of the California Government Code requires that programs or projects undertaken by a public entity shall be planned in a manner that (1) recognizes, at an early stage in the planning of the programs or projects and before the commencement of any actions which will cause displacements, the problems associated with the displacement of individuals, families, businesses, and farm operations, and (2) provides for the resolution of these problems in order to minimize adverse impacts on displaced persons and to expedite program or project advancement and completion. The head of the displacing agency shall ensure the relocation assistance advisory services are made available to all persons displaced by the public entity. If the agency determines that any person occupying property immediately adjacent to the property where the displacing activity occurs is caused substantial economic injury as a result thereof, the agency may make the advisory services available to the person.

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 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 Allocation Plan, in coordination with other State and local agencies as discussed below. These documents include population, employment, and housing projections for the region and its 15 subregions. The City of Los Angeles 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 (RTP/SCS)

Pursuant to California 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 (SCAG 2020b). 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 (SCAG 2020b).

Regional Housing Needs Assessment

After receiving the regional determination from HCD, SCAG then prepares the RHNA Allocation Plan 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 Final RHNA Allocation Plan, was adopted by SCAG's Regional Council on March 4, 2021. The City of Los Angeles was assigned a RHNA of 456,643 units for the October 2021 to October 2029 planning period. Local jurisdictions are required by State law to update their General Plan Housing Elements based on the most recently adopted RHNA allocation.

Local

City of Los Angeles General Plan

The City General Plan was prepared pursuant to State law to guide future development and to identify the City's environmental, social, and economic goals. The General Plan sets forth goals, objectives, and

programs to provide a guideline for day-to-day land use policies and to meet the existing and future needs and desires of the community, while at the same time integrating a range of State-mandated elements including Transportation (Mobility), Noise, Safety, Housing, Open Space, Conservation, and Environmental Justice (Plan for a Healthy LA). The General Plan also includes the General Plan Framework Element (General Plan Framework), discussed below, and the Community Plans, which collectively serve as the required Land Use Element.

General Plan Framework Element

The General Plan Framework sets forth a Citywide comprehensive long-range growth strategy and defines Citywide policies regarding land use, housing, urban form, neighborhood design, open space and conservation, economic development, transportation, infrastructure, and public services (LADCP 1995). General Plan Framework land use policies are implemented at the community level through the City's Community Plans and Specific Plans.

The General Plan Framework also includes population, housing, and employment projections to guide future Community Plan amendments. However, the General Plan Framework makes clear that its population forecasts are estimates for guiding amendments: "…[the Framework Element] is not dependent upon these population levels or distributions for its implementation. It does not mandate specific levels of growth for any specific area (neither minimums nor caps)" (LADCP 1995). The Framework Element planned for a 2010 time horizon, projecting a population of 4,306,565.

The General Plan Framework Housing Chapter states that housing production has not kept pace with the demand for housing. According to the General Plan Framework, the City has insufficient vacant residential properties to accommodate the projected population growth and the supply of land zoned for residential development is constrained (LADCP 1995). The Framework was written during a time where residential uses were limited from being developed in commercial areas; since the Framework's adoption residential development has been increasingly allowed by right in commercial zones, however the State does not recognize the additional capacity for housing in commercial areas and requires jurisdictions to provide evidence of residentially zoned housing capacity.

The General Plan Framework Housing Chapter states that new residential development will require the recycling and/or intensification of existing developed properties (LADCP 1995). The General Plan Framework states that the City must strive to meet the housing needs of the population in a manner that contributes to stable, safe, and livable neighborhoods, reduces conditions of overcrowding, and improves access to jobs and neighborhood services, particularly by encouraging future housing development near transit corridors and stations and near employment centers (LADCP 1995). The Housing Chapter includes goals, objectives and policies to guide future development (LADCP 1995). In particular, Policy 4.1.1 states

that the City should "[p]rovide sufficient land use and density to accommodate an adequate supply of housing units by type and cost within each City subregion to meet the 20-year projections of housing needs." Objective 4.2 "[e]ncourage[s] the location of new multi-family housing development to occur in proximity to transit stations, along some transit corridors, and within some high activity areas with adequate transitions and buffers between higher-density developments and surrounding lower-density residential neighborhoods."

General Plan Housing Element

The Housing Element of the General Plan is prepared pursuant to State law and provides planning guidance in meeting the housing needs identified in the RHNA Allocation. The Housing Element identifies the City's housing conditions and needs; establishes the goals, objectives, and policies that are the foundation of the City's housing strategy; and provides the array of programs the City intends to implement to create sustainable, mixed-income neighborhoods. The 2013-2021 Housing Element, an update to the previous 2006-2014 Housing Element that is based on the updated 2012 RHNA, was adopted by the City Council on December 3, 2013 (City of Los Angeles 2013). Policies to note include Policy 1.1.3 that states the City should "[f]acilitate new construction and preservation of a range of housing types that address the particular needs of the city's households" (City of Los Angeles 2013). Also, Policy 1.3.5 states that the City should "[p]rovide sufficient land use and density to accommodate an adequate supply of housing units by type and cost within the City to meet the projections of housing needs, according to the policies and objectives of the City's Framework Element of the General Plan" (City of Los Angeles 2013).

Plan for a Healthy LA (General Plan Health, Wellness and [Environmental Justice] Element)

In 2015, the City adopted the Plan for a Healthy Los Angeles as the Health and Wellness Element of the General Plan. The development of the Plan built on the Health Atlas for the City of Los Angeles (2013), which provided a data-driven methodology for identifying and addressing key health issues and community vulnerabilities in Los Angeles and helped inform the Plan's outreach efforts, policies, and goals. The Plan for a Healthy LA identifies housing as a key component of building a healthier and more just city. Several of the policies in the element speak to housing, such as Policy 1.6 "Reduce the debilitating impact that poverty has on individual, familial, and community health and well-being by: promoting cross-cutting efforts and partnerships to increase access to income; safe, healthy, and stable affordable housing options; and attainable opportunities for social mobility." A technical amendment to the Plan for a Healthy LA to clarify that the Element serves as the City Environmental Justice Element is proposed as part of this Proposed Plan, see Section 3, *Project Description*, for more details.

Community Plans (General Plan Land Use Element)

The Land Use Element of the City's General Plan is comprised of 35 Community Plans. Community Plans are intended to provide an official guide for future development and propose approximate locations and dimensions for land use. The Community Plans establish standards and criteria for the development of housing, commercial uses, and industrial uses, as well as circulation and service systems. The Community Plans implement the City's General Plan Framework at the local level. The Community Plans consist of both text and an accompanying generalized land use map. The Community Plans' texts express goals, objectives, policies, and programs to address growth and housing need in the community. The Community Plans' maps depict the desired arrangement of land uses as well as street classifications and the locations and characteristics of public service facilities. Per State law, each Community Plan must be consistent with the other Elements and components of the General Plan and, thus, incorporates information from these plans. A Community Plan includes goals, objectives, and policies that establish a vision for its neighborhoods and districts.

Community Plan Updates

The Department of City Planning is in the process of drafting updates to many of the 35 Community Plans, which provide a collective vision for each Community Plan Area. Once adopted, each Community Plan Update will supersede the existing Community Plan for the respective Community Plan Area. Until updates are adopted, existing Community Plans continue to represent the applicable Land Use Element of the City's General Plan, including for purposes of a project's impact analysis.

Green New Deal

In April 2019, Mayor Eric Garcetti released the Green New Deal (Sustainable City pLAn 2019), a program of actions designed to create sustainability-based performance targets through 2050 in order to advance economic, environmental, and equity objectives (City of Los Angeles 2019). L.A.'s Green New Deal is a mayoral initiative rather than an adopted plan and is the first four-year update to the City's first Sustainable City pLAn that was released in 2015. It augments, expands, and elaborates in even more detail L.A.'s vision for a sustainable future and it tackles the climate emergency with accelerated targets and new aggressive goals. The Housing & Development Chapter of the Green New Deal includes the following targets for the number of new housing units to be provided within the City:

- Ensure 57 percent of new housing units are built within 1,500 feet of transit by 2025; and 75 percent by 2035.
- Increase cumulative new housing unit construction to 150,000 by 2025; and 275,000 units by 2035.
- Create or preserve 50,000 income-restricted affordable housing units by 2035 and increase stability for renters.

Los Angeles Municipal Code (LAMC)

Zoning regulations provide for the types and densities of commercial, institutional, industrial, and residential uses permitted in each of the City's zones. Zoning in the City establishes the maximum allowable development in a zone. Zoning also includes height limitations and other development standards which together regulate setbacks, building heights, FAR, open space and parking for each parcel within the City, as applicable.

The LAMC is currently undergoing a comprehensive update to all Zoning Code sections as part of the re:code LA effort. The re:code LA effort, which started in 2013, will update the Zoning Code to make the Code more streamlined, visual, and easy to use. The existing Zoning Code will continue to be located in Chapter 1 of the Los Angeles Municipal Code, while the New Zoning Code will be located in a new Chapter 1A of the Los Angeles Municipal Code. As new Community Plans are adopted they will implement the new zoning code, Chapter 1A, by redesignating the plan area with the new zoning code designations.

Affordable Housing and Labor Standards Initiative (Proposition JJJ)

Proposition JJJ, a voter initiative approved on November 8, 2016, imposed affordable housing and local labor hiring requirements on new development projects, as well as set a minimum wage for hired construction workers. The measure included a number of key provisions. All development projects that include 10 or more residential units and require changes to the General Plan or other zoning are required to make a percentage of the units affordable to lower-income or moderate income residents, or pay a fee to fund affordable housing and enforce laws that protect renters. Developers are required to make as much as 25 percent of the units in a rental project affordable for low-income renters. For for-sale developments, as much as 40 percent of the units are required to be affordable for moderate income households.

Developers of any such residential projects are required to hire contractors who:

- Are licensed according to city and state law;
- Guarantee to offer at least 30 percent of work-hours to city residents, with 10 percent coming from those living within five miles of the project;
- Pay standard wages for the area; and
- Employ members of apprenticeship training programs and workers with real-world experience.

Transit Oriented Communities Affordable Housing Incentive Program

Pursuant to the voter-approved Measure JJJ, LAMC Section 12.22 A.31 was added to create the TOC Affordable Housing Incentive Program (TOC Program). The program provides incentives for developers

to build affordable housing located within a one-half mile radius of major transit stops[5]. The Department of City Planning established the TOC Guidelines to implement the Program, establishing a Tier structure that offers a range of development incentives and affordability requirements based on the development site's proximity to differing levels of transit service. See Section 4.10, Land Use, for more information.

Affordable Housing Linkage Fee Ordinance

The City Council adopted the AHLF Ordinance (Ordinance No. 185,342) on December 13, 2017, which became effective on February 17, 2018 with a phased-in fee structure. As of June 17, 2019, the fee is fully phased-in. The AHLF Ordinance places a fee on certain new market-rate residential and commercial developments to generate local funding for affordable housing. The fee amount is based on the fee schedule in effect at the time the building permit for a project is issued, and the market area within which it is located. Fees are adjusted annually for inflation using the Consumer Price Index (CPIU). The market areas may be updated by City Council every five years beginning July 1, 2023.

Affordable Housing Trust Fund

The City created and administers the Affordable Housing Trust Fund (Fund), which is codified in the LAMC. The Fund establishes a special fund for the purposes of receiving and disbursing monies to address the affordable housing needs of the City. The Fund requires 25 percent of the received initial and continuing net revenue of the 2001 business tax and payroll expense tax amnesty program and the revenue program of the Revenue and Taxation Code Section 1955.1 (AB 63) be allocated to the Fund.

Density Bonus Ordinance

The purpose of the City's Density Bonus Ordinance, codified as LAMC Section 12.22 A.25, is to establish procedures for implementing State Density Bonus requirements, as set forth in California Government Code Sections 65915-65918, and to increase the production of affordable housing, consistent with City policies. Subject to the provisions of LAMC Section 12.22 A.25, housing development projects that include an affordable housing component, and senior citizen housing development projects, may be granted a density bonus, allowing for a density increase over the otherwise maximum allowable residential density under the applicable zoning ordinance and/or Specific Plan. The density bonus is determined based on the percentage and type of restricted affordable housing units provided and shall not exceed 35 percent. The amount of parking required for these projects may also be reduced. In addition, a housing development project that qualifies for a density bonus may be granted incentives set forth in the ordinance that allow for

[5] A Major Transit Stop is a site containing a rail station or the intersection of two or more bus routes with a service interval of 15 minutes or less during the morning and afternoon peak commute periods. The stations or bus routes may be existing, under construction or included in the most recent SCAG RTP.

modification to a City development standard or requirement. Projects requesting a density bonus exceeding 35 percent may do so under the Conditional Use process defined in LAMC 12.24.U.26.

Greater Downtown Housing Incentive Area

The Greater Downtown Housing Incentive Area was established by Ordinance No. 179,076, effective September 23, 2007. Ordinance No. 179,076 was approved for the purpose of encouraging urban in-fill development in High Quality Transit Areas (HQTAs); and it modified several code sections for projects within the Greater Downtown area. Among its provisions, it added a requirement that all projects comply with the Urban Design Standards and Guidelines in the LAMC; it eliminated maximum unit per lot area density limits (within floor area ratio [FAR] limits); and amended the lot area criteria for purposes of calculating project density.

Residential Hotel Unit Conversion and Demolition Ordinance

The Residential Hotel Unit Conversion and Demolition Ordinance (RHO) prohibits conversion or demolition of dwelling units in a residential hotel without approval from the Housing + Community Investment Department (HCIDLA). The ordinance adds Article 7.1 to Chapter IV of the LAMC and amends Sections 91.106.4.1, 151.06, and 151.09. The ordinance seeks to preserve dwelling units provided by residential hotels, which often serve as affordable housing for the very low income, elderly, and disabled (LADCP 2018).

Rent Stabilization Ordinance

The City's RSO was established in response to the shortage of affordable housing in Los Angeles and went into effect May 1, 1979. The RSO's purpose is to regulate rents so as to safeguard tenants from excessive rent increases, while at the same time providing landlords with just and reasonable returns from their rental units. The RSO addresses allowable rent increases, the registration of rental units, legal reasons for eviction, and the causes for eviction requiring relocation assistance payment to the tenant. Rental units subject to the RSO are those that are within the City limits, located on a property containing two or more units, and have a Certificate of Occupancy prior to October 1, 1978, as well as replacement units under LAMC Section 151.28. A complaint can be filed by any tenant who believes that an owner, manager, or agent has committed a violation of the RSO. The Housing and Community Investment Department oversees and enforces the RSO. The RSO comprises Chapter XV of the LAMC.

In 2017, two ordinances amending the RSO went into effect. The "Ellis Amendments" (Ordinance No. 184,873) amended the RSO requirements for demolition or permanent withdrawal of RSO units. The amendments provide clarification on the applicability of RSO to both vacant and occupied units, the unit withdrawal process, and relocation service requirements. In addition, the amendments require that property owners file annual status reports on withdrawn properties and allow landlords to qualify for an

exemption on newly constructed units where RSO units are demolished by providing a certain amount of affordable housing. The second amendment (Ordinance No. 184,822) addresses relocation assistance for unpermitted rental units and requires that eviction notices must list one of the permitted RSO eviction reasons.

Development Guidelines and Controls for City Center and Central Industrial Redevelopment Project Areas

The City Center and Central Industrial Redevelopment Project Areas currently have development guidelines and controls for residential hotel preservation. The Development Guidelines protect and preserve existing affordable housing by mitigating the hardship caused by displacement of low income households. These Development Guidelines guarantee a one for one replacement of residential hotel units when a residential hotel is proposed for conversion or demolition within the City Center and Central Industrial Project Areas.

Mello Act Interim Administrative Procedures / Draft Ordinance

In 2000, the City of Los Angeles entered into a Settlement Agreement, which included implementation of Interim Administrative Procedures (IAP) for complying with the Mello Act in the Coastal Zone areas. Since 2000, Los Angeles City Planning has utilized the IAP while developing a permanent implementing ordinance for the Mello Act. The IAP outlines a series of procedural steps to ensure that projects subject to the Mello Act are properly evaluated and conditioned to result in meeting the housing and conservation goals of the state law.

In 2015, City Council (Council File No. 15-0129-S1), requested that City Planning prepare a permanent ordinance, implementing the State Mello Act. A draft document was released on December 11, 2019, with the following key changes when compared to IAP:

- Eliminates the ability of developers to build required affordable replacement and inclusionary dwelling units "off-site" at another location.
- Creates an in-lieu fee for qualified affordable replacement units and fractional inclusionary units. Standardizes methodology for financial feasibility studies.

As of the preparation of this Draft EIR, the draft Mello Ordinance was currently pending the public hearing and adoption process with the City Council.

Homelessness Reduction and Prevention, Housing, and Facilities Bond (Proposition HHH)

Proposition HHH, approved on November 8, 2016, is a $1.2 billion general obligation bond to finance the construction of supportive and affordable housing for homeless people in the City. The purpose of the bond is to provide safe, clean affordable housing for the homeless and for those in danger of becoming

homeless, such as victims of domestic violence, veterans, seniors, youth exiting the foster care system, and the disabled; and provide facilities to increase access to mental health care, drug and alcohol treatment, and other services.

4.11.3 ENVIRONMENTAL IMPACTS

Thresholds of Significance

In accordance with Appendix G of the State CEQA Guidelines the Proposed Project would have a significant impact related to population and housing if either of the following were to occur:

> **Threshold 4.11-1**: Housing development accommodated by the Housing Element Update were to induce substantial unplanned population growth in an area, either directly (e.g., by proposing new homes and businesses) or indirectly (e.g., through extension of roads or other infrastructure).
> **Threshold 4.11-2:** The Safety Element Update would displace substantial amounts of existing people or housing, necessitating the construction of replacement housing elsewhere.

Methodology

Growth Inducement

The 2006 L.A. CEQA Thresholds Guide (Thresholds Guide) includes guidance for the determination of impacts under the State CEQA Guidelines Appendix G thresholds for population and housing thresholds of significance related to development projects. The following criteria from the Thresholds Guide are considered relevant to the updates to the Housing Element and growth inducing impacts:

- The degree to which the project would cause growth (i.e., new housing or employment generators) or accelerate development in an undeveloped area that exceeds projected/planned levels for the year of project occupancy/build out, and that would result in an adverse physical change in the environment;
- Whether the project would introduce unplanned infrastructure that was not previously evaluated in the adopted Community Plan or General Plan;
- The extent to which growth would occur without implementation of the project

Although CEQA requires an EIR to consider its growth-inducing impacts, CEQA provides that the EIR "should not assume that growth is necessarily beneficial, detrimental, or of little significance." In relation, the underlying purpose of the Housing Element update to accommodate housing needs, which includes needs as a result of population growth and existing need growth in the City, even significant growth, is not a significant impact if it accommodates growth projections for the Project Area and the City, can be accommodated by existing or planned facilities and services, and is consistent with the City's Framework

Element, as well as state and regional policies and regulations. A significant impact for purposes of this threshold is whether the updates to the Housing Element will induce unplanned growth.

Regulatory Compliance Measures (RCMs)

As discussed in the Regulatory Setting, the City has established regulatory requirements to reduce or eliminate risks related to population and housing. These include the following RCMs, which would require that any future housing development under the Housing Element Update would be required to comply with the following, as applicable:

- **RCM-PH-1 (Tenant Displacement):**
    - **Apartment Converted to Condominium** - Prior to final map recordation, and pursuant to the provisions of Section 12.95.2-G and 47.06 of the LAMC, a tenant relocation plan shall be submitted to the Los Angeles Housing and Community Investment Department for review and approval.
    - **Apartment Demolition** - Prior to the issuance of a demolition permit, and pursuant to the provisions of Section 47.07 of the LAMC, a tenant relocation plan shall be submitted to the Los Angeles Housing and Community Investment Department for review and approval.
    - **Mobile Home Park Closure or Conversion to Different Use** - Prior to the issuance of any permit or recordation, and pursuant to the provisions of Section 47.08 and 47.09 of the LAMC, a tenant relocation plan and mobile home park closure impact report shall be submitted to the Los Angeles Housing and Community Investment Department for review and approval.

Project Impacts and Mitigation Measures

Threshold 4.11-1	Will housing development accommodated by the Housing Element Update induce substantial unplanned population growth in an area, either directly (e.g., by proposing new homes and businesses) or indirectly (e.g., through extension of roads or other infrastructure)?

Impact 4.11-1 The Housing Element Update is intended to comply with State law to accommodate the RHNA. The proposed additional housing units would further assist in addressing the current ongoing housing crisis and would be growth accommodating, rather than growth inducing. Therefore, housing development accommodated by the Housing Element Update would not induce substantial unplanned population growth, either directly or indirectly. This impact would be ***less than significant.***

The purpose of the Proposed Project is to comply with State housing element law requiring the City to show it has adequate land designated to accommodate the existing and projected housing needs reflected in the City's RHNA, which is based on measures of existing housing need and the regional population forecasts. The RHNA does not encourage or promote growth, but rather requires communities to address the existing population needs and projected growth while providing its fair share of the regional housing needs.

The State of California requires regions and cities to plan for changes in population, housing, and employment. If regional growth is projected, each city must accommodate a share of anticipated growth. As discussed in Section 3, *Project Description*, the 6th Cycle Final RHNA Allocation Plan was adopted by SCAG's Regional Council on March 4, 2021. The City of Los Angeles was assigned a RHNA allocation of 456,643 housing units, of which 184,721 units must be affordable to lower-income households, for the October 2021 to October 2029 planning period. In addition, State law implicitly requires a sufficient buffer in the Housing Element's Inventory of Sites to accommodate future reductions in the sites identified for affordable housing as they are developed with another use during the eight-year cycle. The City's Inventory of Sites would target identifying a capacity of 486,379 housing units, of which approximately 203,193 units would be accommodated on sites with an allowable density of 30 dwelling units per acre or greater. However, the City is not required to physically construct 456,643 units as a result of the RHNA allocation. For the purposes of this EIR, analysis is based on the environmental impacts of the potential construction and occupation of 420,327 housing units, which represents the City's current RHNA allocation of 456,643 units, less the 36,316 already-approved pipeline housing units expected to receive a Certificate of Occupancy during the 6th cycle of the Housing Element. Nonetheless, the Housing Element Update would also increase the development capacity of the City through the rezoning of certain selected parcels in order to meet the City's total target capacity of 486,379 housing units for the 2021 to 2029 planning period. Rezoning would be accomplished through an implementation program that would need to be completed by 2024, and would include updates to the City's Community Plans, an update to the growth strategy as described in the City's Framework Element, expansion of affordable housing incentive programs (e.g., extending the applicability of the City's TOC Program to areas that are in a High Resource or Very High Resource Area, or near jobs centers), and/or targeted Municipal Code amendments. Rezoning would likely occur in areas identified in the General Plan that are located near transit corridors and stations, job centers, neighborhood services and amenities, and particularly in higher resourced areas to provide a more equitable distribution of housing opportunities.

The development of 420,327 housing units associated with the Housing Element Update would result in an approximately 28-percent increase to 1,898,993 units when compared to the 2016 housing supply of 1,478,666 households reported by the United States Census Bureau's 2016 American Community Survey

(ACS) (United States Census Bureau 2017). The housing units associated with the Housing Element Update would accommodate the RHNA, which is intended to meet existing housing needs (i.e., relieve overcrowding and cost burden for existing population, and provide housing to unhoused population), as well as meet the City's forecasted population growth.

Based on the fact that the Housing Element Update is accommodating the RHNA, which accommodates existing forecasted population and households from the latest SCS/RTP, the forecasted population and households for the horizon year of the Housing Element Update of 2029 is expected to be 4,309,231 and 1,577,966 respectively. These forecasts are based on interpolating the 2045 forecasted population and household numbers from SCAG's 2020-2045 RTP/SCS for the year 2029.

The State requires that all local governments adequately plan to meet the housing needs of their communities (HCD 2021). Given that the State is currently in an ongoing housing crisis due to an insufficient housing supply (SCAG 2020c), housing units under the Proposed Project are intended to address the existing crisis for the City's population by meeting the existing need component of the City's RHNA Allocation.

The Housing Element Update does not directly entail construction of individual development projects, although it includes policies and policy changes to support their development. As discussed in Section 4.9, *Land Use and Planning*, the Housing Element Update includes policies to support the development of various types of housing projects through the year 2029. As analyzed, the Housing Element Update would expand the development capacity of the City in a manner that is consistent with SCAG projections for 2029. Additionally, as previously noted, the additional housing units would further assist in addressing the current ongoing housing crisis and would be subject to review and approval by the California HCD.

Based upon the above, in consideration of the criteria identified in the Methodology above, the Housing Element Update would not cause growth. It is not anticipated that the Housing Element Update would accelerate development in undeveloped areas. Development in undeveloped areas is anticipated to be a very small part of the build out of the RHNA and would generally only occur through areas that are currently zoned and planned for residential uses. To the extent through the Rezoning Program the Housing Element Update would accelerate development in undeveloped areas, any impacts from that, including to biological resources, public services and utilities, have been analyzed throughout this EIR. The Housing Element Update does not propose unplanned infrastructure and any impacts from new infrastructure resulting from the demand from build out of the RHNA, are analyzed in the EIR. Finally, as addressed elsewhere and in the 2020-2045 RTP/SCS, the forecasted growth is the same without the Housing Element Update.

Therefore, the Housing Element Update would not induce substantial unplanned population growth, either directly or indirectly, but rather, would be growth accommodating, and impacts would be ***less than significant.***

Mitigation Measures

No mitigation is required.

Threshold 4.11-2	Will the updates to the Safety Element displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?

Impact 4.11-2 The construction of 420,327 housing units from implementation of the Housing Element Update would provide sufficient replacement housing for the small population whose homes could be affected by a disaster. Therefore, new policies under the Safety Element Update are not anticipated to result in the net loss or displacement of housing, necessitating the construction of replacement housing elsewhere. This impact would be ***less than significant.***

As discussed in the Initial Study (Appendix A), new policies under the Safety Element Update may discourage redevelopment of certain disaster-prone areas after a disaster (e.g., wildfire), which could have the effect of displacement in the event it is determined that a repeated loss would be likely. For example, in an effort to facilitate more effective fire safety standards, new policies and programs would promote stricter standards surrounding the redevelopment of a residence located in or near a Very High Fire Hazard Severity Zone (VHFHSZ), State Responsibility Area (SRA), or other area with habitual wildfire risks in the event such a residence is lost in a disastrous fire. Stricter standards could also be proposed in other repeat loss areas, such as areas subject to frequent flooding or sea level rise, or landslides and subsidence. Earthquakes result in more geographically dispersed damage, as risk is determined by both building materials and construction in addition to proximity to a fault line or epicenter. Additionally, because Los Angeles houses many active fault lines, the epicenter or timing of future earthquakes cannot be accurately predicted using historic data or other existing sources or science. Therefore, additional regulations are unlikely to be placed in any specific geographic area, but citywide regulations to improve earthquake safety can similarly increase the cost of rebuilding.

It is unlikely that the number of residences that would be displaced as a result of a disaster would be greater than the overall increase in housing being accommodated by the Housing Element Update. In September 2017, the La Tuna Fire burned approximately 7,200 acres through the Verdugo Mountains and Sunland-Tujunga neighborhood and was the biggest fire, by acreage, to impact the City of Los Angeles in over 50

years. At the peak of the nine-day fire, more than 700 residents were safely evacuated. However, out of 1,400 homes in danger throughout the course of the fire, only five single-family residences were destroyed (Los Angeles Times 2017). The 1994 Northridge Earthquake is the local disaster with the most significant property damage effects, leading to about 61,000 housing units being destroyed or severely damaged, the majority of which were multi-family rental units. Since the Northridge Earthquake, significant building code and retrofit requirements have been added to the LAMC, so that a similar event today would result in fewer residential structures experiencing significant damage. Therefore, in the event of a catastrophic disaster in the City, it is not anticipated that the number of displaced residences would exceed the increase in housing provided by the Housing Element Update. See Section 4.17, *Wildfire*, for additional background information and impacts associated with wildland fires. The construction of 420,327 housing units from implementation of the Housing Element Update would provide sufficient replacement housing for the population whose homes could be affected by a disaster. Additionally, policy revisions in the Safety Element Update places a greater emphasis on assisting residents in returning to their neighborhoods when housing can be safety repaired or reconstructed. Therefore, new policies under the Safety Element Update are not anticipated to result in the net loss or displacement of housing, necessitating the construction of replacement housing elsewhere. The impact would be ***less than significant***.

Mitigation Measures

No mitigation is required.

4.11.4 CUMULATIVE IMPACTS

Cumulative population and housing impacts consider citywide growth and development. The City is expected to grow in population and housing through 2029. The number of housing units is expected to increase from 1,367,000 to 1,796,261 (i.e., an increase of 429,261 units or 31 percent).

Inducement of Substantial Population Growth

State laws require local governments to regularly assess and plan for future growth. For example, SCAG is required to update its RTP/SCS and accompanying growth projections every four years and the City is required to update its Housing Element, and correspondingly conduct a RHNA, every other RTP/SCS cycle, or every eight years. The 2021-2029 Housing Element Update would accommodate all projected citywide population and housing growth through 2029. Therefore, cumulative impacts relating to population and housing would be the same as project impacts under Impact 4.11-1 and would be *less than significant*.

Displacement of People and Housing

Although new policies under the Safety Element Update under the Proposed Project may discourage redevelopment of certain disaster-prone areas after a disaster, which could have the effect of displacement, it is not anticipated that the number of displaced residences would exceed the increase in housing provided by the Housing Element Update necessitating the construction of replacement housing elsewhere. The construction of 420,327 housing units from implementation of the Housing Element Update would provide sufficient replacement housing for the small population whose homes could be affected by a disaster. Therefore, impacts relating to displacement would not be cumulatively considerable and cumulative impacts would be *less than significant.*

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4.12 PUBLIC SERVICES

This section analyzes the potential environmental effects of the Proposed Project with respect to public services, including fire protection and emergency services, police protection, and schools. Potential impacts to parks are addressed in Section 4.13, *Recreation*. As discussed in the Initial Study (Appendix A), the Proposed Project would not affect the need for new or physically altered public libraries and impacts would be less than significant. Therefore, further analysis of impacts related to library facilities were scoped out of this EIR. Additionally, the Initial Study found that the Safety Element Update would not affect the need for new of physically altered police protection facilities or schools and impacts would be less than significant. Therefore, further analysis of impacts related to police and school facilities as they pertain to the Safety Element Update were scoped out of this EIR.

PUBLIC SERVICES – FIRE PROTECTION

4.12.1 INTRODUCTION

This section evaluates potential environmental impacts resulting from the provision of public service facilities associated with the Proposed Project, specifically whether new or physically altered fire facilities would be required to provide fire protection services to the project. Impacts are evaluated based on the adequacy of existing and planned facilities and any additional demand generated by future housing development.

4.12.2 ENVIRONMENTAL SETTING

The Los Angeles Fire Department (LAFD) provides fire prevention, protection, and emergency medical services (EMS) throughout the City. LAFD is a full-spectrum life safety agency that provides essential emergency and non-emergency services throughout the 472-square mile jurisdiction within the City. The LAFD is organized into groups of 114 fire stations clustered into 14 battalions within four larger geographic groups known as bureaus, consisting of the Central, South, Valley, and West bureaus. Each bureau is commanded by a Deputy Chief who oversees and coordinates daily field operations within each bureau's respective service area. The LAFD also has an Emergency Services Bureau, which was created in May 2016 to address the growing needs and complexity of the EMS system in the City. EMS comprises more than 85 percent of the LAFD's emergency responses and its operations are overseen by a Medical Director. The LAFD is a collective of 3,435 uniformed fire personnel and 381 professional support personnel that provide fire protection and emergency medical services (LAFD 2018).

Service Performance Measures

The LAFD has response time goals consistent with the National Fire Protection Association (NFPA). NFPA standard 1710 establishes criteria that provide context for fire departments to evaluate their response times. According to NFPA 1710 criteria, call processing time should be 64 seconds or less for 90 percent of calls or 106 seconds or less for 95 percent of calls; turnout time should be 80 seconds or less for fire incidents and 60 seconds or less for EMS incidents; the first engine should arrive on scene within four minutes; and the second company should arrive on scene within six minutes.

Although NFPA 1710 provides essential benchmarks, fire departments often measure performance in terms of total response time, which is composed of call processing time, turnout time, and travel time (Lexipol 2020). Based on citywide response metrics for January through August 2020, the average LAFD call processing time is 64 seconds, the average turnout time is 51 seconds for both non-EMS and EMS incidents, and the average travel time is four minutes and 29 seconds for non-EMS incidents and four minutes and 37 seconds for EMS incidents. According to response metrics, the average operational response time is five minutes for structural fire incidents, five minutes and 42 seconds for critical advanced life support (ALS) incidents, six minutes and 18 seconds for non-EMS incidents, and six minutes and 43 seconds for EMS incidents (LAFD 2020).

LAFD's services continue to be based on the community's needs, as determined by on-going evaluations that consider the number of calls and other factors. These evaluations are used to determine the need for reallocation of existing equipment or personnel and/or the acquisition of new equipment, personnel, or new stations. As development occurs, the LAFD reviews EIRs and subdivisions applications for needed facilities. Where appropriate, construction of new facilities is required as a condition of development for individual projects (Los Angeles 2001).

Fire Flow and Response Distance

The adequacy of fire protection for a given area is based on required fire flow, response distance from existing fire stations, and the LAFD's judgment of needs in the area. Personnel and equipment needs for individual fire stations are determined based on the LAFD's review of the number of incidents within a station's service area. As the number of incidents increases, the LAFD assigns new staff and equipment as necessary to maintain acceptable service ratios and response times (Los Angeles 2017). Chapter V (Public Safety and Protection), Article 7 (Fire Protection and Prevention) of the Los Angeles Municipal Code (LAMC), also referred to as the "Fire Code," specifies required fire flow (measured in gallons per minute [G.P.M.] from the local water system) for fire protection services based on the type of land development. The fire flow requirements for residential land uses are shown in Table 4.12-1. The fire flow necessary to

contain a fire depends on the existing land use or combination of land uses and the density of the area being served. Consequently, the amount of water necessary for fire protection depends on various factors, including the type of development, occupancy, and the level or intensity of a fire hazard. Maximum response distances also vary with land use and density of development. When response distances exceed these requirements related to maximum response distances, plans for new structures must be reviewed and various fire suppression equipment (e.g., automatic fire sprinkler systems, fire signaling systems, fire extinguishers, smoke removal systems, and any other fire protection devices) as deemed necessary by the Fire Chief are required to be incorporated in development plans prior to the approval of an occupancy permit. In addition to fire flow requirements, the LAFD requires different types of fire hydrants within a specified distance to deliver the required fire flow to land developments. The requirements for residential land uses are shown in Table 4.12-2.

Table 4.12-1 Required Fire Flow for Residential Uses

Type of Land Development	Required Fire Flow in Gallons per Minute [G.P.M.]
Low Density Residential	2,000 G.P.M. from three adjacent hydrants flowing simultaneously
High Density Residential and Commercial Neighborhood	4,000 G.P.M. from four adjacent hydrants flowing simultaneously
Source: LAMC (Fire Code) Section 57.507.3, Table 57.507.3.1	

Table 4.12-2 Required Fire Hydrant Spacing for Residential Uses

Type of Land Development	Net Land Area Served Per Hydrant[1]	Distance Between Hydrants on Roads and Fire Lanes	Type of Hydrant
Low-Density Residential	150,000 sq. ft.	600 ft	2 1/2" x 4" Double Fire Hydrant
High-Density Residential and Neighborhood Commercial	100,000 sq. ft.	300 - 450 ft	2 1/2" x 4" Double Fire Hydrant

sq. ft. = square feet

ft. = feet

[1] These standards will be systematically reduced where greater fire flow is required due to restricted access, depth of lots, length of blocks, or additional hazards.

Source: LAMC (Fire Code) Section 57.507.3.2, Table 57.507.3.2

4.12.3 REGULATORY FRAMEWORK

Federal

Occupational Safety and Health Administration

The Federal Occupational Safety and Health Administrations (OSHA) as well as California OSHA (Cal-OSHA) enforce the provisions of the federal and state Occupational Safety and Health Acts, respectively, which collectively require safety and health regulations for construction under Part 1926 of Title 29 Code of Federal Regulations (CFR). The fire-related requirements of the Federal Occupational Safety and Health Act are specifically contained in Subpart F, Fire Protection and Prevention, of Part 1926. Examples of general requirements related to fire protection and prevention include maintaining fire suppression equipment specific to construction on-site; providing a temporary or permanent water supply of sufficient volume, duration, and pressure; properly operating the on-site fire-fighting equipment; and keeping storage sites free from accumulation of unnecessary combustible materials.

Federal Emergency Management Act (FEMA)

FEMA was established in 1979 via executive order and is an independent agency of the federal government. In March 2003, FEMA became part of the U.S. Department of Homeland Security with the mission to lead the effort in preparing the nation for all hazards and effectively manage federal response and recovery efforts following any national incident. FEMA also initiates proactive mitigation activities, trains first responders, and manages the National Flood Insurance Program and the U.S. Fire Administration.

Disaster Mitigation Act of 2000

Disaster Mitigation Act (42 United States Code [U.S.C.] Section 5121) provides the legal basis for FEMA mitigation planning requirements for state, local, and Indian Tribal governments as a condition of mitigation grant assistance. It amends the Robert T. Stafford Disaster Relief Act of 1988 (42 U.S.C. Section 5121-5207) by repealing the previous mitigation planning provisions and replacing them with a new set of requirements that emphasize the need and creates incentives for state, tribal, and local agencies to closely coordinate mitigation planning and implementation efforts. This Act reinforces the importance of pre-disaster infrastructure mitigation planning to reduce disaster losses nationwide and the streamlining of the administration of federal disaster relief and programs to promote mitigation activities. Some of the major provisions of this Act include:

- Funding pre-disaster mitigation activities
- Developing experimental multi-hazard maps to better understand risk
- Establishing state and local government infrastructure mitigation planning requirements

- Defining how states can assume more responsibility in managing the Hazard Mitigation Grant Program (HMGP)
- Adjusting ways in which management costs for projects are funded

The mitigation planning provisions outlined in Section 322 of this Act establish performance-based standards for mitigation plans and require states to have a public assistance program (Advance Infrastructure Mitigation [AIM]) to develop county government plans. The consequence for counties that fail to develop an infrastructure mitigation plan is the chance of a reduced federal share of damage assistance from 75 percent to 25 percent if the damaged facility has been damaged on more than one occasion in the preceding 10-year period by the same type of event.

State

California Building Code and California Fire Code

The California Building Code (California Code of Regulations [CCR], Title 24, Part 2) is a compilation of building standards, including general fire safety standards for new buildings, which are presented with more detail in the California Fire Code (CCR 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 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.[1] 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.[2]

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 Governor's Office of Emergency Service (Cal OES), Fire and Rescue Division is responsible for the development, implementation and coordination of the California Fire Service and

[1] California Building Code (CCR, Title 24, Part 2).
[2] 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 March 19, 2019.

Rescue Emergency Mutual Aid Plan (Mutual Aid Plan).[3] 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 Mutual Aid Plan, the Cal 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 Plan 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 Cal OES.[4]

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 directs 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,

[3] Governor's Office of Emergency Services, Fire and Rescue Division, California Fire Service and Rescue Emergency Mutual Aid System, Mutual Aid Plan, revised December 2014, http://www.caloes.ca.gov/FireRescueSite/Documents/CalOES%20-%20Fire%20and%20Rescue%20-%20Mutual%20Aid%20Plan%20-%2020141201.pdf. Accessed August 8, December 2018.
[4] 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 March 19, 2019.

the City 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. Trustee of California State University (2015) 242 Cal. App. 4th 833, the court found under 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.

Local

City of Los Angeles Charter

Section 520 of the Los Angeles City Charter states that the LAFD's duty is to control and extinguish injurious or dangerous fires and to remove that which is liable to cause those fires. It also requires the LAFD to enforce all ordinances and laws relating to the prevention or spread of fires, fire control, and fire hazards within the City, as well as to conduct fire investigations and protect lives and property in case of disaster or public calamity.

City of Los Angeles General Plan Framework Element

The City of Los Angeles General Plan Framework Element (Framework Element), adopted in December 1996 and readopted in August 2001, sets forth general guidance regarding land use issues for the entire City of Los Angeles and defines citywide policies regarding land use, including infrastructure and public services. Goal 9J of the Infrastructure and Public Services Chapter of the Framework Element specifies that every neighborhood should have the necessary level of fire protection service, emergency medical service,

and infrastructure.[5] Objective 9.16 requires that the demand for existing and projected fire facilities and service be monitored and forecasted. Objective 9.17 requires that all areas of the City have the highest level of fire protection and emergency medical service, at the lowest possible cost, to meet existing and future demand. Objective 9.18 requires that the development of new fire facilities be phased with growth. Further, Objective 9.19 requires the maintenance of the LAFD's ability to assure public safety in emergency situations. Under the Framework Element, the City goal for response distance for emergency medical response and the distance of fire stations for engine companies from neighborhood land uses is 1.5 miles.[6] This is consistent with the specifications for response distances within the LAMC, discussed below.

City of Los Angeles General Plan Safety Element

The City of Los Angeles General Plan Safety Element (Safety Element), adopted on November 26, 1996, includes policies related to the City's response to hazards and natural disasters, including fires. In particular, the Safety Element sets forth requirements, procedures, and standards to facilitate effective fire suppression and emergency response capabilities. In addition, the City's Safety Element designates disaster routes. The Safety Element is undergoing a targeted update as part of the Proposed Project; however, the Goals, Objectives and Policies listed below in Table 4.12-3 will remain.[7]

Table 4.12-3 Relevant General Plan EMS and Fire Protection Goals, Objectives, and Policies

Framework Element – Infrastructure and Public Services	
Goal 9J	Every neighborhood has the necessary level of fire protection service, emergency medical service (EMS) and infrastructure.
Objective 9.16	Monitor and forecast demand for existing and projected fire facilities and service.
Policy 9.16.1	Collect appropriate fire and population development statistics for the purpose of evaluating fire service needs based on existing and future conditions.
Objective 9.17	Assure that all areas of the City have the highest level of fire protection and EMS, at the lowest possible cost, to meet existing and future demand.
Policy 9.17.2	Identify areas of the City with deficient fire facilities and/or service and prioritize the order in which these areas should be upgraded based on established fire protection standards.
Policy 9.17.4	Consider the Fire Department's concerns and, where feasible adhere to them, regarding the quality of the area's fire protection and emergency medical services when developing General Plan amendments and zone changes, or considering discretionary land use permits.
Objective 9.19	Maintain the Los Angeles Fire Department's ability to assure public safety in emergency situations.
Policy 9.19.1	Maintain mutual aid or mutual assistance agreements with local fire departments to ensure an adequate response in the event of a major earthquake, wildfire, urban fire, fire in areas with substandard fire protection, or other fire emergencies.
Policy 9.19.3	Maintain the continued involvement of the Fire Department in the preparation of contingency plans for emergencies and disasters.

[5] City of Los Angeles General Plan Framework Element, Chapter 9: Infrastructure and Public Services.
[6] City of Los Angeles General Plan Framework Element, Chapter 9: Infrastructure and Public Services, Status of Infrastructure System/Facilities, Fire.
[7] Some targeted revisions to the goals, policies and objectives listed in Table 4.12-3 are proposed as part of the update to the Safety Element. Whereas the policies within the current Safety Element each list a corresponding EOO program in parentheticals, the updated plan will have a separating listing of programs in a new chapter. These programs will cover the actions listed in parentheticals in Table 4.12-3, with added specificity on future actions and interdepartmental responsibilities. Additionally, Policy 2.1.6 will be revised to remove the bulleted list of specific standards, as this information is better detailed in internal LAFD documents and the LAMC (as detailed in the table below). The policy will continue to direct the Fire Department to maintain requirements, procedures, and standards to facilitate adequate fire suppression.

Safety Element	
Goal 2	A city that responds with the maximum feasible speed and efficiency to disaster events so as to minimize injury, loss of life, property damage and disruption of the social and economic life of the City and its immediate environs.
Objective 2.1	Develop and implement comprehensive emergency response plans and programs that are integrated with each other and with the City's comprehensive hazard mitigation and recovery plans and programs.
Policy 2.1.5	Response. Develop, implement, and continue to improve the City's ability to respond to emergency events. [All Emergency Operations Organization (EOO) emergency response programs and all hazard mitigation and disaster recovery programs related to protecting and reestablishing communications and other infrastructure, service and governmental operations systems implement this policy.]
Policy 2.1.6	Standards/fire. Continue to maintain, enforce and upgrade requirements, procedures and standards to facilitate more effective fire suppression. [All peak load water and other standards, code requirements (including minimum road widths, access, and clearances around structures) and other requirements or procedures related to fire suppression implement this policy.] The Fire Department and/or appropriate City agencies shall revise regulations or procedures to include the establishment of minimum standards for location and expansion of fire facilities, based upon fire flow requirements, intensity and type of land use, life hazard, occupancy and degree of hazard so as to provide adequate fire and emergency medical event response. At a minimum, site selection criteria should include the following standards which were contained in the 1979 General Plan Fire Protection and Prevention Plan: • Fire stations should be located along improved major or secondary highways. If, in a given service area, the only available site is on a local street, the site must be on a street which leads directly to an improved major or secondary highway. • Fire station properties should be situated so as to provide drive-thru capability for heavy fire apparatus. • If a fire station site is on the side of a street or highway where the flow of traffic is toward a signalized intersection, the site should be at least 200 feet from that intersection in order to avoid blockage during ingress and egress. • The total number of companies which would be available for dispatch to first alarms would vary with the required fire flow and distance as follows: (a) less than 2,000 gallons per minute (gpm) would require not less than 2 engine companies and 1 truck company; (b) 2,000 but less than 4,500 gpm, not less than 2 or 3 engine companies and 1 or 2 truck companies; and (c) 4,500 or more gpm, not less than 3 engine companies and 2 truck companies. These provisions of the 1979 Plan were modified by the Fire Department for purposes of clarification.
Goal 3	A city where private and public systems, services, activities, physical condition and environment are reestablished as quickly as feasible to a level equal to or better than that which existed prior to the disaster.
Objective 3.1	Develop and implement comprehensive disaster recovery plans which are integrated with each other and with the City's comprehensive hazard mitigation and emergency response plans and programs.
Policy 3.1.1	Coordination. Coordinate with each other, with other jurisdictions and with appropriate private and public entities prior to a disaster and to the greatest extent feasible within the resources available, to plan and establish disaster recovery programs and procedures which will enable cooperative ventures, reduce potential conflicts, minimize duplication and maximize the available funds and resources to the greatest mutual benefit following a disaster. [All EOO recovery programs involving cooperative efforts between entities implement this policy.]
Source: City of Los Angeles 1996 and 2001	

Los Angeles Municipal Code

The Los Angeles Fire Code (LAMC Chapter V, Article 7) incorporates by reference portions of the California Fire Code and the International Fire Code. The City's Fire Code sets forth regulatory requirements pertaining to the prevention of fires; the investigation of fires and life safety hazards; the elimination of fire and life safety hazards in any building or structure (including buildings under construction); the maintenance of fire protection equipment and systems; and the storage, use, and handling of hazardous materials. Specific regulations regarding fire prevention and protection are discussed below.

Section 57.106.5.2 provides that the Fire Chief shall have the authority to require drawings, plans, or sketches as may be necessary to identify: (1) occupancy access points; (2) devices and systems; (3) utility controls; (4) stairwells; and (5) hazardous materials/waste.

Section 57.107.6 requires that the installation, alteration, and major repair of the following be performed pursuant to a permit issued by the Department of Building and Safety: Fire Department communication systems, building communication systems, automatic elevators, heliports, emergency power systems, fire escapes, private fire hydrants, fire assemblies, fire protective signaling systems, pilot lights and warning lights for heat-producing equipment, refrigerant discharge systems, smoke detectors, emergency smoke control systems, automatic sprinkler systems, standpipe systems, and gas detection systems.

Section 57.118 establishes LAFD's fire/life safety plan review and LAFD's fire/life safety inspection for new construction projects.

Section 57.118.1.1 requires that all new high-rise buildings greater than 75 feet in height (measured from the lowest point with fire access) must include fire/life safety reviews by the Department of Building and Safety and LAFD.

Section 57.408 requires the preparation of an Emergency Plan that establishes dedicated personnel and emergency procedures to assist the LAFD during an emergency incident, and establishes a drill procedure to prepare for emergency incidents. The Emergency Plan would also establish an on-site emergency assistance center and establish procedures to be followed during an emergency incident. The Emergency Plan must be submitted to the LAFD for approval prior to implementation, and must be submitted annually (and revised if required by the LAFD).

Section 57.4704.4.3.1 of the LAMC requires that the smoke detectors required by Chapter 9 of the LAMC (Building Code) be maintained in dependable operating condition and tested every six months or as

required by the Fire Chief. An accurate record of such tests must be kept by the owner, manager, or person in charge of the property, and such records must be open to examination by the Fire Chief.

Section 57.4705.1.6 requires there must be at least one elevator which shall be available for fire EMS and shall have its controls designed so that key switches located in the building control station/fire command center will recall said elevator or elevators to the designated main floors.

Section 57.4705.4 requires each building to have a rooftop emergency helicopter landing facility in a location approved by the Chief.

Section 57.4705.1.6 requires at least one elevator in each bank of elevators to be available for fire emergency service and to have its controls designed so that key switches located in the building control station/fire command center will recall said elevator or elevators to the designated main floor. The elevator or elevators must be interconnected with the standby power.

Section 57.503.1.4 requires an approved, posted fire lane whenever any portion of an exterior wall is more than 150 feet from the edge of a roadway.

Section 57.507.3.1 establishes fire water flow standards, which vary from 2,000 gallons per minute (gpm) in low-density residential areas to 12,000 gpm in high-density commercial or industrial areas, with a minimum residual water pressure of 20 pounds per square inch (psi) remaining in the water system. Site-specific fire flow requirements are determined by the LAFD based on land use, life hazard, occupancy, and fire hazard level.

Section 57.507.3.2 addresses land use-based requirements for fire hydrant spacing and type. Regardless of land use, every first story of a residential, commercial, or industrial building must be within 300 feet of an approved hydrant. The site-specific number and location of hydrants would be determined as part of LAFD's fire/life safety plan review for each development.

Section 57.507.3.3 limits the maximum response distances to an LAFD station based on the type of land use. Applicable distances are based on LAFD's comment letter for each individual project.

LAMC Chapter V, Article 7, Section 57.512.1 provides that response distances, which are based on land use and fire flow requirements and range from 0.75 mile for an engine company to 2 miles for a truck company, shall comply with Section 57.507.3.3. Where a site's response distance is greater than permitted, all structures must have automatic fire sprinkler systems.

Propositions F and Q

Proposition F, the City of Los Angeles Fire Facilities Bond, was approved by voters in November 2000. This bond allocated $532.6 million of general obligation bonds to finance the construction and rehabilitation of fire stations and animal shelters. Under Proposition F, new regional fire stations to provide training and other facilities at or near standard fire stations must be designed and built on a single site of at least 2 acres. This is to ensure that firefighters in training remain in the service area and are available to respond to emergency calls. Proposition F allocated $378.6 million to build 19 new or replacement neighborhood Fire/Paramedic Stations and an Emergency Air Operations and Helicopter Maintenance Facility, for a total of 20 Proposition F projects. As of January 2017, all of the proposed projects have been completed.[8]

Proposition Q, the Citywide Public Safety Bond Measure, was approved by voters in March 2002. Proposition Q allocated $600 million to renovate, improve, expand and construct public safety (police, fire, 911, and paramedic) facilities. In March 2011, the program was expanded to include renovations to existing LAFD facilities throughout the City. A total of 80 renovation projects at LAFD facilities were scheduled. These renovation projects include the installation of diesel exhaust capture systems, upgrades to air filtration and electrical systems, re-roofing, remodeling, parking lot repair, painting, and other improvements. The fire renovation projects identified under this measure have been completed.[9]

Measure J

Measure J, which was approved by voters at the November 7, 2006 General Election, is a charter amendment and ordinance that involves technical changes to Proposition F. Measure J allows new regional fire stations funded by Proposition F to be located in densely developed areas to be designed and built on one or more properties equaling less than two acres. Components of a regional fire station can be built on two or more sites within close proximity, or the facility can be designed to fit on a single site of less than two acres. Components of a regional fire station can be built on two or more sites within close proximity, or the facility can be designed to fit on a single site of less than two acres.

Los Angeles Fire Department Strategic Plan 2018–2020

The Los Angeles Fire Department Strategic Plan 2018–2020, A Safer City 2.0, is a collaborative effort between LAFD staff, city leaders, and community members to accomplish the LAFD's organizational vision. The Strategic Plan 2018–2020 builds upon the progress of the first Strategic Plan from 2015–2017, which resulted in the achievement of 70 percent of its goals. As provided in the Strategic Plan 2018–2020, five goals will guide the LAFD for the next three years: (1) Provide exceptional public safety and emergency service; (2) Embrace a healthy, safe and productive work environment; (3) Implement and capitalize on

[8] Los Angeles Fire Department, Los Angeles 2000 Prop F Fire Facilities Bond, Progress Report Feb-March 2016.
[9] City of Los Angeles, A 2002 Proposition Q Citywide Safety Bond Program Progress Report – February/March 2016, http://www.lapropq.org/modules/fileUpload/files/Prop%20Q%20Monthly%20Feb%20Mar%202016%20Report.pdf. Accessed September 2020.

advanced technology; (4) Enhance LAFD sustainability and community resiliency; and (5) Increase opportunities for personal growth and professional development.

Community Plans

The Land Use Element of the City's General Plan includes 35 community plans. Community plans are intended to provide an official guide for future development and propose approximate locations and dimensions for land use. The community plans establish standards and criteria for the development of housing, commercial uses, and industrial uses, as well as circulation and service systems. The community plans implement the City's General Plan Framework at the local level and consist of both text and an accompanying generalized land use map. The community plans' texts express goals, objectives, policies, and programs to address growth in the community, including those that relate to fire protection required to support such growth. The community plans' maps depict the desired arrangement of land uses as well as street classifications and the locations and characteristics of public service facilities.

4.12.4 ENVIRONMENTAL IMPACTS

Thresholds of Significance

In accordance with Appendix G of the CEQA Guidelines, the Proposed Project's impacts related fire protection facilities and services would be significant if the Project would:

- **Threshold 4.12-1:** Result in substantial adverse physical impacts associated with the provision of new or physically altered fire protection facilities, or the need for new or physically altered facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for fire protection services.

Consistent with *City of Hayward v. Trustees of California State University* (2015; 242 Cal.App.4th 833), significant impacts under CEQA consist of adverse changes to physical conditions resulting from a project. Potential impacts on public services are not an environmental impact that CEQA requires a project applicant to mitigate: "[T]he obligation to provide adequate fire and emergency medical services is the responsibility of the city." (Cal. Const., art. XIII, § 35, subd. (a)(2) ["The protection of the 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."].) Therefore, while response times and standards for services are provided in the impact discussions below for Impact 4.12-1, they are provided for informational purposes and to provide an indication of potential need for new facilities, rather than as thresholds of significance for environmental effects.

Methodology

The analysis uses the following metrics from the LAFD to assess potential demands on fire protection services and whether increased demands would create the need for new or expanded facilities: fire flow requirements, emergency access, and the ability of the LAFD to provide adequate fire protection services based on current facilities, equipment, and staffing levels. This analysis is based, in part, on information publicly available on the LAFD website.

This analysis focuses on determining whether the Housing Element Update would result in adverse physical impacts to the environment due to the expansion of existing fire protection and emergency facilities or construction of new facilities. Whether additional facilities would be required is determined primarily by considering the adequacy of existing fire protection services and impacts of future residential development on demand for fire services. Whether provision of new or expanded facilities would result in substantial adverse environmental effects is evaluated by considering the physical context in which facilities would be built, constraints on the size and number of new and/or expanded facilities, and an analysis of potential environmental impacts that would result from their construction.

Project Impacts and Mitigation Measures

Threshold 4.12-1	Would the Proposed Project result in a substantial adverse physical impacts associated with the provision of new or physically altered fire protection facilities, need for new or physically altered fire protection facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for fire protection?

Impact 4.12-1 Forecasted growth being accommodated by the Housing Element Update would increase demand for fire protection service in the City, which could result in the need for new or expanded fire protection facilities. Large multi-family projects and/or projects in areas that are susceptible to wildfire may require mitigation measures for fire facilities to ensure that adequate fire protection services are provided. The size and location of new facilities is not known at this time and future mitigation may prove infeasible. It is anticipated that new or expanded fire stations could be needed based on the forecasted growth accommodated by build out of the RHNA during the plan horizon. It is also foreseeable that new or expanded fire stations could be built without creating significant environmental impacts since new facilities would be of limited size and scale; however, site

specific conditions are not known. Based upon the above, such impacts would be ***significant and unavoidable***. However, ***no impact*** would occur under the proposed updates to the Safety Element.

Housing Element Update

Construction activities associated with new residential development accommodated under the Housing Element Update would potentially temporarily increase existing demand on fire protection and EMS. Construction activities could potentially expose combustible materials (e.g., wood, plastics, sawdust, coverings, and coatings) to fire risks from machinery and equipment sparks, exposed electrical lines, and chemical reactions in combustible materials and coatings. However, in compliance with OSHA requirements, construction managers and personnel would be trained in emergency response and fire safety operations. In addition, fire suppression equipment (e.g., fire extinguishers) would be maintained on each specific construction site during construction.

Road and lane closures due to construction activities related to individual development projects could temporarily affect travel times of fire and emergency services vehicles. Traffic delays caused by potential closures could impede the ability of emergency vehicles to efficiently move along roadways to their destination. In addition, road closures may result in detours that adversely affect response times. However, individual developers are required to implement construction staging and traffic management plans consistent with LAFD and LADOT requirements, if warranted, to ensure emergency access is maintained. In addition, construction activities for development accommodated under the Housing Element Update would not result in the need for expansion of existing fire stations or construction of new fire stations due to the temporary nature of construction.

As discussed in Section 3, *Project Description*, the Housing Element Update is a plan to accommodate forecasted growth and existing need. As such, the Housing Element Update is not anticipated to cause or result in growth, so this section analyzes the impacts from the forecasted growth being accommodated by the Housing Element Update. The forecasted increase in population would likely result in an increase in EMS and fire incidents requiring LAFD response. Increased land use intensity and residential density would contribute to congestion of area roadways used by fire protection vehicles to access emergency sites. The ability of EMS and fire protection services to respond to calls in a timely manner depends primarily on the volume of calls, the distance of the station to the incident, and the speed at which the emergency vehicles are able navigate intervening roadways. While growth under the Proposed Project would result in an increase in overall traffic and emergency call volumes in the City, this would not impede emergency response since California State law requires that drivers yield the right-of-way to emergency vehicles and remain stopped until the emergency vehicles have passed. The LAFD, in collaboration with the Los Angeles

Department of Transportation (LADOT), has also developed a Fire Preemption System (FPS) that automatically turns traffic lights to green for emergency vehicles traveling on designated streets in the City. Generally, multi-lane arterial roadways allow emergency vehicles to travel at higher speeds and permit other traffic to maneuver out of the path of the emergency vehicle.

Existing regulations and policies would partially offset future increases in demand for fire protection service. For example, developers would be required to comply with current Fire Code standards, which require new construction to incorporate more dynamic and advanced fire and life safety technologies and fire prevention measures than was previously required. Furthermore, LAFD has a constitutional mandate to protect public safety and must respond to changing circumstances and, therefore, would act to maintain response times. As development occurs over the lifetime of the Housing Element Update, it is expected that fire protection service levels would be evaluated and maintained by LAFD. In conformance with California Constitution Article XIII, Section 35, (a)(2), existing policies, procedures and practices related to fire protection and emergency services, LAFD would maintain acceptable emergency response times through the provision of additional personnel and equipment as needed, as well as potentially constructing new or expanding existing fire and emergency response facilities. Nonetheless, large projects with hundreds of units and/or projects in areas that are susceptible to wildfire may require additional measures to ensure that adequate fire protection services are provided, including review of project plans prior to construction, building design and fire safety features pursuant to LAFD review and guidance.

The types of housing units anticipated under the Housing Element Update would generally fall into five categories of development projects - multi-family residential development; single-family residential development; ADUs; mixed use development; and conversion and/or rehabilitation of existing nonresidential, residential, and mixed-use structures to be used for housing. A review of the housing development in the City in Table 4-2, shows that impacts associated with fire protection services were less than significant for the majority of the developments reviewed. Of the 54 projects reviewed, four large projects were found to require mitigation measures to reduce impacts to a level of less than significant. Further discussion of the potential impacts of these project types follows.

- **Multi-family residential:** Multi-family residential projects may range in size from small apartment buildings with 2-10 units to larger apartment buildings and high-rise structures with hundreds of units. Multi-family developments of any size would potentially increase the need for fire facilities and services. Small multi-family developments could be located in areas throughout the City; and, large multi-family development projects would primarily be located in in Regional Centers and around transit. Additional multi-family developments of varying scales may also be accommodated in the High and Highest Resources Areas, as shown in Figure 3-5, as a result of the Rezoning Program. Larger multi-family developments would result in greater impacts in comparison to smaller projects

considering that they would accommodate a higher density of housing units. However, developers would be required to comply with State and local regulations that include fire and fire safety requirements. As listed in Table 4-2, the 520 Mateo Project included the demolition of two existing warehouses and the construction of 600 units in the Central City North Community Plan Area. In the EIR, the project was found to have reduced potential impacts to fire protection services by incorporating mitigation measures, project design features, and regulatory compliance measures such as complying with the 2014 Fire Code, safety measures during construction, the submission of an emergency response plan and other measures. The San Mateo project summary and impact analysis for the Project are provided below:

The Project would develop a 13-story building containing up to 600 live/work units, 20,000 square feet of office space, 15,000 square feet of restaurant space, 15,000 square feet of retail space, and 10,000 square feet of cultural space with associated subterranean parking. Excavation for the Project would reach a depth of approximately 36 feet below the existing grade.

Construction

In light of State and City regulations and code requirements that would in part require personnel trained in fire prevention and emergency response, maintenance of fire suppression equipment, and implementation of proper procedures for storage and handling of flammable materials, to be on the Project Site, construction impacts on fire protection and emergency medical services would be less than significant. Impacts on traffic that could cause delays in emergency response times are addressed through a required Construction Traffic Management Plan, which includes traffic management strategies for Project operations and construction. Project construction would not be expected to tax fire-fighting and emergency services to the extent that there would be a need for new or expanded fire facilities in order to maintain acceptable service ratios, response times, or other performance objectives of the LAFD, due to the limited duration of construction activities and compliance with applicable codes. Therefore, impacts associated with construction of the Project would be less than significant.

The construction contractors and work crews shall properly maintain the mechanical equipment according to best practices and the manufacturers' procedures, ensure proper storage of flammable materials, and cleanup of spills of flammable liquid. If there are partial closures to streets surrounding the Project Site, flagmen shall be used to facilitate the traffic flow until the street closure around the construction is complete. During demolition and construction, LAFD access from major roadways shall remain clear and unobstructed. Furthermore, the Project shall comply with the 2014 Los Angeles Fire Code and any subsequent codes at the time of building permits, including the requirements for automatic fire sprinkler systems and any other fire protection devices deemed necessary by the Fire Chief (e.g., fire signaling systems, fire extinguishers, smoke removal systems, etc.). The Project Applicant shall submit a plot plan to the LAFD

prior to occupancy of the Project, for review and approval, which shall provide the capacity of the fire mains serving the Project Site. Any required upgrades shall be identified and implemented prior to occupancy of the Project. The Project Applicant shall submit an emergency response plan to Los Angeles Fire Department prior to occupancy of the Project for review and approval. The emergency response plan would include but not be limited to the following: mapping of emergency exits, evacuation routes for vehicles and pedestrians, location of nearest hospitals, and fire stations. Any required modifications shall be identified and implemented prior to occupancy of the Project.

Operation

LAFD review and Project compliance with applicable regulations is a legal prerequisite. The Project would also generate revenues to the City's General Fund (e.g., in the form of property taxes and sales tax revenue) that could be applied toward the provision of new fire facilities and related staffing, as deemed appropriate. The Project Site is located within the maximum acceptable response distances for both fire engines and truck companies. Thus, the impact of the Project upon emergency response distances would be less than significant. Furthermore, the Project Applicant would be required to submit an emergency response plan for approval by the LAFD, to help ensure that Project construction and operations would not impede fire access to and from the Project Site, which would create the need for new or physically altered facilities. Project impacts related to emergency access and performance objectives would be less than significant.

To ensure that fire protection services are adequate within the proposed buildings and around the Project Site, Project Design Features FIR-PDF-1 through FIRPDF-4 and Mitigation Measure FIR-MM-1 would be included (requiring submittal of plot plan to LAFD). These features allow the LAFD to ensure that the Project will not increase demand on the fire department to the extent that a new or significantly expanded facility is needed, the construction of which may cause a significant impact on the environment.

The design of the Project Site shall provide adequate access for LAFD equipment and personnel to the structures. Submittal of a plot plan for approval by the LAFD either prior to the recordation of a final map or the approval of a building permit shall be required. The plot plan shall include the following minimum design features: fire lanes, where required, shall be a minimum of 20 feet in width; all structures must be within 300 feet of an approved fire hydrant, and entrances to any dwelling unit or guest room shall not be more than 150 feet in distance in horizontal travel from the edge of the roadway of an improved street or approved fire lane. (DEIR at 4.K.1-13 to 17, 4.K.1-20 to 23.)

- **Single-family residential:** Single-family residential projects may range in size and scale from smaller single-family homes to larger single-family homes, and from small-lot subdivisions to multi-property single-family subdivisions. Out of the five types of housing anticipated under the Housing Element Update, single-family residential projects would be the most likely to occur in Very High Fire Hazard Severity Zones (VHFHSZ). The proposed Rezoning Program avoid environmentally sensitive areas,

including VHFHSZs; however, such development could occur under existing zoning. Single-family developments of any size and location could cause an increase in the need for fire protection services. Developers would be required to comply with State and local regulations that include fire and fire safety requirements. Nonetheless, like most residential development anticipated under the Housing Element Update, new single-family developments would be primarily located in urbanized areas where available land is limited, and therefore, would have the potential to result in increased demand on existing fire stations, potential increased delay in response times from that demand and need for new or expanded facilities. The typical single-family home project would be like the 1209 6th Avenue project, listed in Table 4-2, which was analyzed in an EIR. The project is a Small-Lot development with two single-family units on a 5,005-square foot lot located in the Venice Community Plan area. The analysis in the Initial Study found that the potential impacts to fire protection services were less than significant based on the following:

> *The Project does not meet the City's screening criteria for a project with the potential to impact fire services because the Project Site is located within 1.5 miles of an engine or truck company; is not located in a brush fire hazard area, hillside, or area with inadequate fire hydrant service or street access; does not involve the use, manufacture or storage of toxic, readily combustible, or otherwise hazardous materials; allows for adequate emergency access; and there are no street intersections with a level of service (LOS) of E or F near the Project Site that would adversely impact response time. Additionally, Project development would result in a minimal population increase which would allow the existing nearest fire station, LAFD Station 63, to continue to be able to serve the Project Site and would not require additional staffing. Impacts would be less than significant and no further analysis is required in the EIR.*

An example of a less typical type of project, is the Hidden Creek Project, listed in Table 4-2, which is a large single-family residential development consisting of 188 single-family residences, a park, and an equestrian boarding facility on a 259-acre development site in an unincorporated area immediately northwest of Porter Ranch. The project would introduce a 15.8-acre equestrian facility to encourage the use of trails near the project site. The EIR found that current structural fire hazard risks were low because of the undeveloped nature of the project site; construction activities would increase the amount of people and activity on the project site; fire hydrants would be installed as required by the City's Fire Code at the time streets are constructed, prior to construction of homes on the site. A mitigation measure, MM-FIRE-2, was required for the installation of two fire hydrants at the fire department staging area to be located at the southern portion of the project site adjacent to the equestrian center and one additional hydrant at the intersection of Browns Canyon Road with the project access road to enhance the ability to fight wildfires. With implementation of mitigation, potentially significant impacts during project construction were found to be reduced to less than significant. The Hidden Creek Draft EIR provided the following analysis:

Construction

The project site is located within a historical wildfire corridor. The project site is located in the Los Angeles County's Very High Fire Hazard Severity Zone. Once annexed to the City, the City's High Hazard Fire Zone boundaries would most likely be extended to include the project site due to the project site's proximity to neighboring High Hazard Fire Zone areas. Elevated temperatures and winds in excess of 20 miles per hour may create drying conditions for the vegetation onsite and may create a fire hazard for the construction staff.

Current structural fire hazard risks are low because of the undeveloped nature of the project site. Construction activities would increase the amount of people and activity on the project site Fire hydrants will be installed as required by the City's Fire Code at the time streets are constructed, prior to construction of homes on the site. Mitigation Measure MM-FIRE-2 also requires the installation of two fire hydrants at the fire department staging area to be located at the southern portion of the project site adjacent to the equestrian center and one additional hydrant at the intersection of Browns Canyon Road with the project access road to enhance the ability to fight wildfires. With the implementation of mitigation, potentially significant impacts during project construction would be reduced to less than significant.

Operation

The LAFD would provide fire protection services to the project site. A mutual agreement with the Los Angeles County Fire Department would also make County fire fighters available for fire protection services. The project site is located within a historical wildfire corridor and is presently within a Very High Fire Hazard Severity Zone as defined by Los Angeles County. Once annexed to the City, the City's High Hazard Fire Zone boundaries would most likely be extended to include the project site. However, as part of the project, several improvements would be incorporated into the project design to reduce the historical risk of wildfire on the project site. There are currently no fire hydrants located on the project site. With project implementation, four fire hydrants would be installed throughout the project site adjacent to structures in accordance with LAFD and City of Los Angeles standards. Two of these new hydrants would be located in a fire department staging area located adjacent to the equestrian center at the southern end of the project site. In addition, based on consultation with the LAFD, an addition fire hydrant will be located at the intersection of Browns Canyon Road with the project access road to enhance the ability of LAFD to provide fire protection in Browns Canyon.

The project would meet the stated fire flow requirement of 4,000 gpm from the four fire hydrants flowing simultaneously as required by the LAFD for the project site. Additionally, new and improved emergency access to the project site would be provided. Access to the project site would be available via both the newly extended Mason Avenue as well as via Browns Canyon Road. As part of the project, Browns Canyon Road

would be spot-widened for turnouts in 14 locations north of De Soto Avenue and south of the project site, as discussed in detail in Section II, Project Description. These new paved turnouts will have a minimum pavement thickness of 6 inches to support emergency vehicles. Mitigation Measure MM-FIRE-10 requires the project to be conditioned to establish binding legal responsibility for the project homeowners' association to provide annual weed abatement and brush clearance consistent with LAFD standards from the intersection of the project access road with Browns Canyon Road southerly to De Soto Avenue. An emergency access gate will be provided on the project access road at the northern edge of the equestrian facility with approved locking devices for both Los Angeles City and County fire departments on both sides of the gate. With these emergency access road improvements incorporated into the project, adequate emergency access would exist for both the LAFD and the Los Angeles County Fire Department.

Mitigation measures MM-FIRE-1 through MM-FIRE-14 listed in the EIR for this project would mitigate potential impacts on fire services. As service would be provided from existing LAFD Fire Stations and construction of additional facilities are not required to serve the project, impacts would not be significant (RDEIR at IV.L.2-8 to 14)

The more typical project to develop in hillsides would be the 2730 Onyx Drive Project, as listed in Table 4-2, a Small-Lot development with 32 single-family units on a 186,956-square foot undeveloped lot located in the Northeast Los Angeles Community Plan Area, near Rose Hill, within a VHFHSZ. The Project was found to have less than significant impacts with a mitigation measure requiring submittal of a plot plan to the Fire Department and minimum design features of a fire lane with minimum 20 foot width, all structures within 300 feet of a hydrant, and entrances no more than 150 feet from edge of street or fire lane (MND 2014-3179 at p. 70-71).

- **ADUs:** ADUs are created through a building addition or conversion of existing floor area and detached ADUs of various scales, which are allowed in any zone that allows for residential use, as well as on any site that contains an existing residential use. An ADU would result in one or more additional units on a property containing existing or proposed residential units. The City's ADU regulations require new construction of ADUs located both in VHFHSZ and Hillside Areas to be protected with an automatic fire sprinkler system (LAMC 12.22 A.33(c)(4)ii.a). The development of ADUs involving new construction could potentially increase the need for fire protection services, however, the increase in demand for existing fire protection services would not be substantial as ADUs provide for modest increases in residential intensity in areas that are already served by fire protection services and based on fire sprinkler requirements in VHFHSZ and Hillside Areas.
- **Mixed use development:** Mixed use development could range in size and scale from neighborhood commercial mixed use with smaller nonresidential uses, to high-rise mixed-use with larger nonresidential uses. Mixed use developments of any size would cause an increase in the need for fire

protection facilities. However, large-scale mixed use development projects would result in more substantial impacts to fire protection facilities considering that large mixed-use developments will presumably accommodate a greater number of housing units and thus create a greater demand on existing fire protection services. Furthermore, developers would be required to comply with State and local regulations that include fire and fire safety requirements. Nonetheless, large mixed-use developments would accommodate a greater density and therefore, would have greater potential to result in substantial impacts on response times and fire protection services. As listed in Table 4-2, the Sunset and Gordon Mixed-Use Project is a recent example of a large mixed-use development in the Hollywood Community Plan Area. The project includes the development of a 324,432-square foot project including 311 multi-family residences, 53,500 square feet of commercial space consisting of 40,000 square feet of office and 13,500 square feet of retail (including 8,500 square feet of restaurant uses), 508 parking spaces, a 21,177-square foot public park, and two super graphic signs. The project incorporates various project design features, regulatory compliance measures, and mitigation measures to reduce potential impacts on fire protection services. Measures include but are not limited to proper emergency access, compliance with the LAMC regarding automatic sprinklers, and the preparation of a Fire Life Safety Resources Management Plan. The summary of the impact analysis for fire protection services in the Sunset Gordon DEIR is provided below:

Construction

The Certified EIR concluded the CRA Approved Project would result in less than significant impacts related to increase demands upon Fire Department services during the construction period. As described in the Certified EIR for the CRA Approved Project, removal of the onsite buildings and construction of the CRA Approved Project would increase the potential for accidental onsite fires from such sources as the operation of mechanical equipment, the use of flammable construction materials, and the careless disposal of cigarettes. However, the Certified EIR noted that the CRA Approved Project would implement good housekeeping procedures by the construction contractors and the work crews to minimize the potential for accidental onsite fire hazards. Consistent with the CRA Approved Project, good housekeeping procedures would be implemented during the additional construction required for the Modified Project, as provided for in Project Design Feature IV.J-1, and would include: the maintenance of mechanical equipment in good operating condition; careful storage of flammable materials in appropriate containers; and the immediate and complete cleanup of spills of flammable materials when they occur. Construction activities could necessitate temporary lane closures on streets adjacent to the Project Site on a temporary and intermittent basis for utility relocations/hook-ups, delivery of materials, and other construction activities as may be required. These impacts, while potentially adverse, are considered to be less than significant for the Modified Project for the following reasons: (1) Construction impacts are temporary in nature and do not cause lasting effects; and (2) Additional construction activities required for Modified Project could necessitate temporary lane closures on

streets adjacent to the Project Site on a temporary and intermittent basis. These temporary lane closures would not greatly affect emergency vehicles, the drivers of which normally have a variety of options for avoiding traffic, such as using their sirens to clear a path of travel or driving in the lanes of opposing traffic. Additionally, if there are temporary lane closures to streets surrounding the Project Site, flagmen would be used to facilitate the traffic flow until construction is complete.

Minimal additional on-site construction would occur as part of the Modified Project, as compared to the CRA Approved Project, associated with the installation and retrofitting for the new automated steel parking structure and interior building renovations. The Certified EIR for the CRA Approved Project anticipated a 24-month construction timeline and expected to generate 200 – 250 daily construction workers during the construction period. The Modified Project's additional construction period would last approximately four months and would generate approximately 83 daily construction workers, which is not a substantial increase from the CRA Approved Project's construction timeline and number of construction workers. Therefore, the limited additional construction required for the Modified Project would not be expected to tax fire fighting and emergency services to the extent that there would be a need for new or expanded fire facilities in order to maintain acceptable service ratios, response times, or other performance objectives of the LAFD. In addition, the Modified Project would implement Certified EIR Code-Required Measures J.1.2-1, J.1.2-2, and J.1.2-6 through J.1.2-11, which ensure fire protection measures are achieved during the construction period, and would further reduce impacts related to fire protection services during construction. Therefore, construction-related impacts to fire protection services as a result of the Modified Project would be less than significant. Accordingly, as compared to the CRA Approved Project, the proposed Modified Project would not involve new significant environmental effects or a substantial increase in the severity of previously identified significant effects related to fire protection services during construction of the Modified Project.

Operation

The Certified EIR concluded the CRA Approved Project would result in less than significant impacts during operation of the CRA Approved Project in relation to increased demands upon Fire Department services. As described in the Certified EIR for the CRA Approved Project, due to the location of the CRA Approved Project in an area adequately served by existing fire stations within a 1-mile radius of the Project Site, response times are anticipated to be within Fire Department standards. The Certified EIR also stated the CRA Approved Project, which includes a high-rise residential tower, would be required by the Fire Code to install automatic fire sprinklers to reduce or slow the spread of fire. The CRA Approved Project would also not cause any intersections in the CRA Approved Project vicinity to be significantly impacted and would not inhibit emergency vehicle access. The Certified EIR also stated additional hydrants would be installed per Fire Code requirements based upon the specific land uses to be introduced (i.e., multi-family residential, commercial, and parking uses).

- **Conversion and/or rehabilitation:** Existing nonresidential, residential, and mixed-use structures could be converted or rehabilitated for new residential uses. The conversion or rehabilitation of existing properties would generally not involve new construction but may result in full-time residents in structures that were previously not occupied by residents, such as adaptive reuse projects. Some conversion and/or rehabilitation projects can be small, such as a conversion of a duplex to a single-family home. Some can be quite large and involve both rehabilitation and new construction, such as the Crossroads Hollywood Project. Therefore, housing density and intensity could increase significantly as some conversion and/or rehabilitation projects could introduce new full-time residents and housing units to existing properties. In such cases, impacts would be similar as those identified for multi-family and/or mixed-use projects. Demand on existing fire protection services could be substantial.

Based on a review of the case studies in Table 4-2, impacts from individual projects are less than significant generally and mitigation is required for large scale projects, such as the 520 Mateo Project or for projects like the Hidden Creek project in VHFHSZ areas. With mitigation, impacts are found to be less than significant.

Although there are no current plans to construct new fire stations or expand a fire station, it is foreseeable that providing fire services to the growth accommodated by the build-out of the RHNA will result in the need for new or expanded fire facilities over the plan horizon. According to Table 3-5, in Section 3, *Project Description*, new fire stations could be needed in areas with the highest resource tracts, as those areas would be prioritized for additional residential density through the Rezoning Program.

Potential environmental impacts of construction and operation of new residential development have been evaluated throughout this EIR, and they would not be substantially different for a fire/paramedic station/facility. It is not foreseeable that impacts from upgrades to any existing stations or the construction of new stations in the City would have greater or different impacts than those identified in this EIR for construction or operations. Similar to other types of development, the construction of new or expanded fire protection facilities could contribute to significant impacts, such as to historic resource and construction noise and vibration similar to those identified in Sections 4.4, *Cultural Resources*, and 4.10, *Noise*, of this EIR. Based on the urban location and the relatively small size of typical fire protection facilities (approximately 25,000 square feet[10]), the construction of a new fire facility or expansion of an existing facility would likely qualify for an infill exemption or result in less–than-significant impacts with standard regulatory compliance measures and project specific design features or project specific mitigation measures identified

[10] Los Angeles International Airport (LAX) Specific Plan Amendment Study Draft EIR. 2012. https://www.lawa.org/-/media/lawa-web/lawa-our-lax/specific-plan-amendment-study/draft-eir/lax-spas-deir-041101-fire-protection.ashx. Accessed April 2021.

through environmental review. The EIR for Van Nuys No. 39 fire station, certified in 2017, found no unavoidable significant impacts for the construction of a new fire station.

To the extent that any significant impacts could result from the unique characteristics of a specific site, those impacts would be speculative at this time. Furthermore, although it is possible that new community facilities could be developed without significant environmental effects beyond those identified in this EIR, the construction a new LAFD facility or expansion of an existing facility would require separate project-specific environmental analysis to address any site-specific environmental concerns not identified in the EIR. In addition, as indicated by the review of previous projects above, large residential and mixed-use projects with hundreds of units, and/or projects in areas that are susceptible to wildfire may require mitigation measures for new facilities, such as hydrants, to ensure that adequate fire protection services are provided. Therefore, impacts related to fire protection and emergency services would be ***potentially significant***.

Safety Element Update

The Proposed Project includes updates to the Safety Element that would integrate goals, policies, and objectives from other citywide long-range planning documents into the General Plan. The updated Safety Element would maintain the current approach of including high-level goals and objectives that speak to multiple hazards, including fire hazards. Policy 2.1.6 currently states that the City will: "Continue to maintain, enforce and upgrade requirements, procedures and standards to facilitate more effective fire suppression" and details several specific standard recommendations. The bulleted list of standards will be removed, as this information is more appropriately housed in internal LAFD documents and the LAMC. However, the overall focus of the policy will be carried forward. The proposed update to this policy is as follows:

> *Safety Element Policy 2.1.6: Continue to maintain, enforce and upgrade requirements, procedures and standards to facilitate more effective fire suppression, including enforcement of peak water supply requirements and minimum roadway widths and clearances.*

The updated Safety Element is also proposed to include a new objective focused on preventing the advance of climate change in effort to ensure that fires, and other disaster events, do not continue to increase in severity and frequency. The proposed objective, which mirrors policy language in the Mayor's Office Sustainability pLAn/Green New Deal, is as follows:

Objective 1.2

Confront the global climate emergency by setting measurable targets for carbon reduction that are consistent with the best available methods and data, center equity and environmental justice, secure fossil-free jobs and foster broader environmental sustainability and resiliency.

Policies

1.2.1 Environmental Justice. *In keeping with the Plan for a Healthy LA, build a fair, just and prosperous city where everyone experiences the benefits of a sustainable future by correcting the long running disproportionate impact of environmental burdens faced by low income families and communities of color.*

1.2.2 Renewable Energy. *Aggressively pursue renewable energy sources, transitioning away from fossil based sourced of energy and toward 100% renewable energy sources.*

1.2.3 Local Water. *Continue to lead in water conservation and smart water policy through improvements to per capita water use, watershed management, and wastewater and stormwater recycling.*

1.2.4 Clean and Healthy Buildings. *Design, build and rebuild buildings using passive energy principals, advanced efficiency measures, and on-site renewable energy.*

1.2.5 Housing and Development. *In keeping with the Housing Element, put affordable housing within reach of every family and a roof over the head of every Angeleno by developing housing that is affordable, efficient and connected to transportation options.*

1.2.6 Mobility and Public Transit. *In keeping with the Mobility Plan, build a comprehensive and integrated transit network that changes how Angelenos get around and reduced car dependency.*

1.2.7 Zero Emissions Vehicles. *In keeping with the Mobility Plan, work toward zero emissions transportation and goods movement and increases zero emissions infrastructure including charging.*

1.2.8 Industrial Emissions and Air Quality Monitoring. *In keeping with the Air Quality Element, ensure that every Angeleno can breathe clean, healthy air by addressing air pollution from all sources, with a particular emphasis on prioritizing the health and wellbeing of overburdened families and delivering environmental justice.*

1.2.9 Waste and Resource Recovery. *Harvest waste as a resource, stimulate economic innovation, and create green jobs by improving and expanding existing systems of trash and recycling.*

1.2.10 Food Systems. *In keeping with the Plan for a Healthy LA, ensure access to healthy, sustainable food in a changing climate, especially in communities already facing food access disparities.*

1.2.11 Urban Ecosystem and Resilience. *In keeping with the Conservation and Open Space Elements, create a more temperate biodiverse city with more green space for people and habitat.*

1.2.12 Prosperity and Green Jobs. *Leverage investments in green infrastructure and systems to create inclusive economic opportunities for the city's workforce.*

1.2.13 Lead by Example*. Leverage government owned properties and publicly-driven investments to realize broader climate change goals.*

Adoption of this update would further the City's ability to plan for and mitigate hazardous conditions and situations associated with fire protection, and therefore, would not result in the need for additional fire stations or the expansion, consolidation, or relocation of an existing facilities in order to maintain services. Therefore, ***no impacts*** associated with fire protection services would occur under the Safety Element Update.

Mitigation Measures

4.12-1(a): Design Plans Review

For discretionary projects with more than 300 units or located in VHFHSZ or SRA areas and where LAFD finds it necessary on the basis that existing regulations are not adequate to avoid risk of fire based on unusual site-specific, area, roadway or project characteristics, prior to the start of construction, design plans shall be submitted to the LAFD that demonstrate the use of construction and design features that reduce fire potential and/or promote containment, including increased spacing between buildings, noncombustible roofs, fire-resistant landscaping, and special irrigation facilities. Design features shall be reviewed and approved by the LAFD prior to project approval.

Upon completion of project construction, a diagram of each portion of the property, including access routes and any additional information that might facilitate fire and emergency medical response, shall be submitted to the LAFD.

4.12-1(b): Emergency Access

For discretionary projects with more than 300 units or located in VHFHSZ or SRA areas and where LAFD finds it necessary on the basis that existing regulations are not adequate to avoid risk of fire based on unusual site-specific, area, roadway or project characteristics, during demolition and construction of discretionary projects, access roads and alleyways shall remain clear and unobstructed in order to ensure access for emergency vehicles. If road closures during construction are necessary, prior to the issuance of a building permit for the discretionary project, a detailed Construction Management Plan including street closure information, a detour plan, haul routes, and a staging plan, shall be prepared and submitted to the Los Angeles Fire Department and the Los Angeles Department of Transportation for review and approval.

Furthermore, if emergency access gates are provided on a project access road, the gates shall be equipped with approved locking devices for both Los Angeles City and County Fire Departments on both sides of the gate. Signs shall be provided on the project access road.

4.12-1(c): Hillside Fire/Vegetation Management Plan

For discretionary projects with more than 300 units or located in VHFHSZ or SRA areas and where LAFD finds it necessary on the basis that existing regulations are not adequate to avoid risk of fire based on unusual site-specific, area, roadway or project characteristics, projects shall have a 200-foot minimum Fuel Management Zone in place, and it shall be cleared annually, around each structure on the project site. A Fire/Vegetation Management Plan for the Fuel Management Zone shall be prepared that requires the following: all-natural vegetation will be thinned out by 70 percent and all dead vegetation, including grass will be maintained at less than four inches in height; if the zone is not irrigated, the area may be covered with chipped biomass four inches deep; no tree limb shall be within 10 feet of a chimney, including outdoor barbeques; trees must be maintained free of dead branches; trees must be limbed up four feet or ⅓ the height of the tree; trees over driveways or roads must be limbed up to 15 feet; the shrub height limit is two feet.

Furthermore, the following requirements shall be included in the Fire/Vegetation Management Plan. The following shrubs and trees are highly flammable and shall not be planted on or around the project site:

- Sage species (Salvia spp.)
- Pampas grass (Cortaderia spp.)
- Cypress (Cupressus spp.)
- Eucalyptus (Eucalyptus spp.)
- Juniper (Juniperus spp.)
- Pine (Pinus spp.)
- Cedar (Cedr*us* spp.)

The following shrubs and trees shall be used for general landscaping to reduce fire hazard associated with flammable vegetation:

- Coastal live oak (Quercus spp.)
- California sycamore (Platanus racemosa)

- Cottonwood (Populus fremontii)
- Willow (Salix spp.)
- Mulefat (Baccharis salicifolia)
- California bay (Umbellularia californica)
- California black walnut (Juglans californica)
- Liquidambar (Liquidambar styraciflua)
- California lilac (Ceanothus spp.)
- Toyon (Heteromeles arbutifolia)
- Mountain mahogany (Cercocarpus betuloides)
- Holly leaf cherry (Prunus ilicifolia)
- Dwarf periwinkle (Vinca minor)
- Grass (Stipa spp.)

The Fire/Vegetation Management Plan shall be reviewed and approved by the City of Los Angeles Fire Department prior to project approval.

4.12-1(d): Submittal of Plot Plan

For discretionary projects with more than 300 units or located in VHFHSZ or SRA areas and where LAFD finds it necessary on the basis that existing regulations are not adequate to avoid risk of fire based on unusual site-specific, area, roadway or project characteristics, submittal of a plot plan for approval by the LAFD either prior to the recordation of a final map or the approval of a building permit shall be required. The plot plan shall include the following minimum design features: fire lanes, where required, shall be a minimum of 20 feet in width; all structures must be within 300 feet of an approved fire hydrant, and entrances to any dwelling unit or guest room shall not be more than 150 feet in distance in horizontal travel from the edge of the roadway of an improved street or approved fire lane. In addition, the following recommendations by the LAFD relative to fire safety shall be incorporated into the building plans:

- Access for Fire Department apparatus and personnel to and into all structures shall be required.
- The entrance to a residence lobby must be within 50 feet of the desired street address curb face.

- Where above ground floors are used for residential purposes, the access requirement shall be interpreted as being the horizontal travel distance from the street, driveway, alley, or designated fire lane to the main entrance of individual units.
- The entrance or exit of all ground dwelling units shall not be more than 150 feet from the edge of a roadway of an improved street, access road, or designated fire lane. No building or portion of a building shall be constructed more than 150 feet from the edge of a roadway of an improved street, access road, or designated fire lane.
- The Fire Department may require additional vehicular access where buildings exceed 28 feet in height.
- Building designs for multi-storied residential buildings shall incorporate at least one access stairwell off the main lobby of the building; but, in no case greater than 150 feet horizontal travel distance from the edge of the public street, private street or Fire Lane. This stairwell shall extend unto the roof.
- Entrance to the main lobby shall be located off the address side of the building.
- Any required Fire Annunciator panel or Fire Control Room shall be located within 50 feet of the visual line of site of the main entrance stairwell or to the satisfaction of the Fire Department.
- Where rescue window access is required, provide conditions and improvements necessary to meet accessibility standards as determined by the Los Angeles Fire Department.
- Fire lane width shall not be less than 20 feet. When a fire lane must accommodate the operation of Fire Department aerial ladder apparatus or where fire hydrants are installed, those portions shall not be less than 28 feet in width.
- The width of private roadways for general access use and fire lanes shall not be less than 20 feet, and the fire lane must be clear to the sky.
- Fire lanes, where required, and dead ending streets shall terminate in a cul-de-sac or other approved turning area. No dead ending street or fire lane shall be greater than 700 feet in length or secondary access shall be required.
- Submit plot plans indicating access road and turning area for Fire Department approval.
- Adequate public and private fire hydrants shall be required.
- Standard cut-corners will be used on all turns.
- Any roof elevation changes in excess of three feet may require the installation of ships ladders. The Fire Department may require additional roof access via parapet access roof ladders where

buildings exceed 28 feet in height, and when overhead wires or other obstructions block aerial ladder access.

- All parking restrictions for fire lanes shall be posted and/or painted prior to any Temporary Certificate of Occupancy being issued.
- Plans showing areas to be posted and/or painted "FIRE LANE NO PARKING" shall be submitted and approved by the Fire Department prior to building permit application sign-off.
- Electric Gates approved by the Fire Department shall be tested by the Fire Department prior to Building and Safety granting a Certificate of Occupancy.
- All new buildings shall have approved radio coverage for emergency responders within the building based upon the existing coverage levels of the public safety communication systems of the jurisdiction at the exterior of the building. This section shall not require improvement of the existing public safety communication systems.
- Helicopter landing facilities are required on all high-rise buildings in the City in accordance with the recently revised Fire Protection Bureau Requirement 10.
- Each standpipe in a new high-rise building shall be provided with two remotely located fire department connections (FDCs) for each zone in compliance with NFPA 14-2013, Section 7.12.2.

Significance After Mitigation

Implementation of Mitigation Measures 4.12-1(a) through 4.12-1(d) would reduce demands on LAFD for fire protection services. However, it is not feasible as a policy matter to impose the measures on ministerial projects based on the City resources needed to apply and enforce the new regulations on all housing developments. Moreover, even with imposition of the mitigation measures, build out of the RHNA may foreseeably result in the need for new or expanded fire facilities, which may, based on site specific conditions, result in significant impacts. Based on this, impacts related to fire protection services would be ***significant and unavoidable***.

4.12.5 CUMULATIVE IMPACTS

The geographic area to analyze cumulatively considerable impacts to fire protection and emergency services includes the City as well as areas at the City's periphery that could potentially be affected by construction of a new facilities. For assessment purposes, cumulative development includes housing plus non-residential development through 2029.

Cumulative development throughout City would increase overall demand for fire protection service and may create the need for more fire fighters and potentially new facilities. However, current and future development in the City would be required to comply with all applicable LAFD Fire Code requirements associated with adequate fire access, fire flows, and number of hydrants as a condition of project approval. In addition, any development project that would be located at distances that exceed response distance requirements would be required to undergo plan review by the Fire Chief, who would determine the fire suppression measures that the development project would be required to implement. New development would be required to provide upgrades to the water distribution systems serving the LAFD service area in accordance with LAFD and/or Los Angeles Department of Water and Power (LADWP) requirements. As with the code requirements for fire access, fire flows, number of hydrants, and fire suppression measures, these upgrades would be addressed for new development in conjunction with individual project approvals. These requirements would thus create the need for new or expanded facilities. However, in the event that cumulative development would result in the need for new or expanded fire and emergency response facilities, the construction and operation of new facilities would be expected to result in similar impacts to those impacts discussed in the other sections of this EIR. For example, similar to construction noise and vibration impacts under the Housing Element Update, development of new facilities would also have the potential to result in significant and unavoidable construction noise and vibration impacts, particularly if individual fire facilities are located adjacent to sensitive receivers. Nonetheless, the construction and operational impacts of new facilities would be localized in nature and the addition of multiple new facilities in specific locations may have localized impacts, but would not result in significant additive or cumulative impacts (i.e., the addition of multiple fire protection facilities in various parts of the City would not result in additive effects at any given location). Therefore, the project's incremental effect related to fire service would not be cumulatively considerable and cumulative impacts would be less than significant.

Based on the above information, the incremental effect of the Proposed Project with respect to fire protection services would not be cumulatively considerable and cumulative impacts would be ***less than significant***.

PUBLIC SERVICES – POLICE PROTECTION

4.12.6 INTRODUCTION

This section evaluates potential environmental impacts resulting from the provision of public service facilities associated with the Housing Element Update, specifically whether new or physically altered police facilities would be required to provide police protection services to the project. Impacts are evaluated based on the adequacy of existing and planned facilities and any additional demand generated by future housing development. As discussed in the Initial Study (Appendix A), the Proposed Project includes updates to the Safety Element to formally integrate related long-range planning efforts, which would not result in any adverse impact related to police protection and such impacts are not discussed further in this analysis.

4.12.7 ENVIRONMENTAL SETTING

The Los Angeles Police Department (LAPD) provides police protection services to the entire City of Los Angeles. The LAPD is organized into four bureaus, consisting of the Central, South, Valley, and West bureaus, which are sub-divided into 21 divisions that cover neighborhoods throughout the City.

Each division has its own police station that serves as the division's headquarters and provides police protection services to areas within its jurisdiction. For example, the Central Community Police Station serves the areas of Bunker Hill/Historic Core, Central City East, Chinatown, Civic Center, Downtown Los Angeles, Fashion District, Jewelry District, Little Tokyo, Old Bank District, Solano Canyon, South Park-Entertainment, and the Toy District that collectively comprise the Central Community (LAPD 2020a; LAPD 2020b). Table 4.12-4 summarizes the service areas for each bureau.

Table 4.12-4 LAPD Bureaus and Stations Serving the City

Bureaus	Police Stations	Approximate Service Area in Square Miles
Central	Central, Rampart, Hollenbeck, Northeast, Newton	65
South	77th Street, Southwest, Harbor, Southeast	68
Valley	Van Nuys, Mission, North Hollywood, Foothill, Devonshire, West Valley, Topanga	226
West	Wilshire, Hollywood, West Los Angeles, Olympic, Pacific	124
Source: LAPD 2020c; 2020d; 2020e; 2020f		

Service Performance Measures

Response time represents the period of time elapsed from the initiation of an assistance call to the appearance of a police unit at the scene. Unlike fire protection and emergency services, police units are most often in a mobile state; therefore, the distance between a police station and a project site is of less relevance. Instead, the number of deployed police officers and their proximity to crimes is more directly related to the response time. The LAPD employs approximately 9,850 sworn police officers and 3,000 civilian personnel (LAPD 2020g). Based on a City population of 3,923,341, there are approximately 24.6 officers per 10,000 persons (California Department of Finance 2021). This is above the 2016 national average number of officers per 10,000 persons (16.8) for jurisdictions with a population of 500,000 and higher (Governing 2018).

LAPD and Crime Prevention Through Environmental Design

- The City has undertaken a new initiative called "Design Out Crime," implementing into City government the techniques of Crime Prevention Through Environmental Design (CPTED). The LAPD Crime Prevention Unit also consults with private developers to incorporate CPTED techniques into projects and participates in the City's Permit Processing Network, an inter-agency task force that reviews complex development projects. The Design Out Crime program introduces ways to deter crime by changing the design of buildings and public spaces. It involves the following preventive steps that developers, architects, and individuals can take to reduce crime in their homes, businesses, and neighborhoods by applying three interrelated key concepts – natural surveillance, natural access control, and territorial reinforcement (LAPD 2020:
    - Housing units can be designed so as to allow neighbors to "self-patrol" their environments.
    - Lighting and landscaping may be enhanced in parking lots to improve visibility.
    - Fences around housing developments can be designed in ways that avoid creating hiding places for criminals.
    - Signs can be removed from storefront windows to allow clear views in and out of the store.
    - Vines or planted coverings may be placed on walls to deter graffiti.
- The LAPD handles an estimated 2,981,238 telephone calls for service per year and approximately 1,270,278 are non-emergency related. According to the 2020 Crime Statistics summary, there were 13,124 violent crimes, 43,981 property crimes, and 36,187 arrests in 2020 (LAPD 2021).

4.12.8 REGULATORY FRAMEWORK

State

California Vehicle Code, Section 21806

Section 21806 of the California Vehicle Code (CVC) pertains to emergency vehicles responding to Code 3 incident/calls.[1] 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....(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 for local public safety services. California Government Code Sections 30051-30056 provide rules to implement Proposition 172. Public safety services include police protection. Section 30056 provides 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, 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 Trustees 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.

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.

Local

City of Los Angeles General Plan

Framework Element

The City of Los Angeles General Plan Framework Element (General Plan Framework), originally adopted in December 1996 and re-adopted in August 2001, provides a comprehensive vision for long-term growth within the City and guides subsequent amendments of the City's Community Plans Specific Plans, zoning ordinances, and other local planning programs.

Chapter 9 of the General Plan Framework addresses Infrastructure and Public Services and includes goals, objectives, and policies related to police protection, as shown in Table 4.12-5. Goal 9I states that every neighborhood should have the necessary police services, facilities, equipment, and manpower required to provide for the public safety needs of that neighborhood. Related Objective 9.13 and Policy 9.13.1, which implement Goal 9I, require the monitoring and reporting of police statistics and population projections for the purpose of evaluating existing and future needs. Objective 9.14 requires that adequate police services, facilities, equipment, and personnel be available to meet existing and future public needs. Policies related to Objective 9.14 generally provide guidance for public agencies. Objective 9.15 requires LAPD services to provide adequate public safety in emergency situations by maintaining mutual assistance relationships with local law enforcement agencies, state law enforcement agencies, and the National Guard.

Table 4.12-5 Relevant General Plan Police Protection Goals, Objectives, and Policies

Framework Element – Chapter 9, Infrastructure and Public Services	
Goal 9I	Every neighborhood in the City has the necessary police services, facilities, equipment, and manpower required to provide for the public safety needs of that neighborhood.
Objective 9.13	Monitor and forecast demand for existing and projected police service and facilities.
Policy 9.13.1	Monitor and report police statistics, as appropriate, and population projections for the purpose of evaluating police service based on existing and future needs.
Objective 9.14	Protect the public and provide adequate police services, facilities, equipment and personnel to meet existing and future needs.
Policy 9.14.1	Work with the Police Department to maintain standards for the appropriate number of sworn police officers to serve the needs of residents, businesses, and industries.
Policy 9.14.5	Identify neighborhoods in Los Angeles where facilities are needed to provide adequate police protection.
Policy 9.14.7	Participate fully in the planning of activities that assist in defensible space design and utilize the most current law enforcement technology affecting physical development.
Objective 9.15	Provide for adequate public safety in emergency situations.
Policy 9.15.1	Maintain mutual assistance agreements with local law enforcement agencies, State law enforcement agencies, and the National Guard to provide for public safety in the event of emergency situations.
Source: City of Los Angeles 2001	

Community Plan

The Land Use Element of the City's General Plan includes 35 community plans. Community plans are intended to provide an official guide for future development and propose approximate locations and dimensions for land use. The community plans establish standards and criteria for the development of housing, commercial uses, and industrial uses, as well as circulation and service systems. The community plans implement the City's General Plan Framework at the local level and consist of both text and an accompanying generalized land use map. The community plans' texts express goals, objectives, policies, and programs to address growth in the community, including those that relate to police protection required to support such growth. The community plans' maps depict the desired arrangement of land uses as well as street classifications and the locations and characteristics of public service facilities.

City of Los Angeles Charter

The City Charter at Section 570 gives the power and the duty to the LAPD to enforce the penal provisions of the Charter, City ordinances, and state and federal laws. The Charter also gives responsibility to the LAPD to act as peace officers and to protect lives and property in case of disaster or public calamity.

Administrative and Municipal Codes

Section 22.240 of the Administrative Code requires the LAPD to adhere to the state standards described in Section 13522 of the California Penal Code for the training of police dispatchers. LAMC Chapter 5 includes regulations, enforceable by the police, related to fire arms, illegal hazardous waste disposal, and nuisances (such as excessive noise), and providing support to the Department of Building and Safety Code Enforcement inspectors and the LAFD in the enforcement of the City's Fire, Building, and Health Codes. The LAPD is also given the power and the duty to protect residents and property, and to review and enforce specific security related mitigation measures in regard to new development.

Los Angeles Police Department (LAPD) Computer Statistics Unit (COMPSTAT) Program

The LAPD COMPSTAT was created in 1994 and implements the General Plan Framework goal of assembling statistical population and crime data to determine necessary crime prevention actions. This system implements a multi-layer approach to police protection services through statistical and geographical information system (GIS) analysis of growing trends in crime through its specialized crime control model. COMPSTAT has effectively and significantly reduced the occurrence of crime in Los Angeles communities through accurate and timely intelligence regarding emerging crime trends or patterns.[11]

LAPD Guidelines and Plan Review

Projects subject to City review are required to develop an Emergency Procedures Plan to address emergency concerns and practices. The plan is subject to review by LAPD. In addition, projects are encouraged to comply with the LAPD's Design Out Crime Guidelines, which incorporates techniques of Crime Prevention Through Environmental Design (CPTED) and seeks to deter crime through the design of buildings and public spaces (LAPD 2017d). Specifically, projects are recommended to:

Provide on-site security personnel whose duties shall include but not be limited to the following:

- Monitoring entrances and exits;
- Managing and monitoring fire/life/safety systems;
- Controlling and monitoring activities in parking facilities;
- Install security industry standard security lighting at recommended locations including parking structures, pathway options, and curbside queuing areas;

[11] LAPD, *COMPSTAT,* http://www.lapdonline.org/crime_mapping_and_compstat/content_basic_view/6363, accessed October 10, 2018.

- Install closed-circuit television at select locations including (but not limited to) entry and exit points, loading docks, public plazas and parking areas;
- Provide adequate lighting of parking structures, elevators, and lobbies to reduce areas of concealment;
- Provide lighting of building entries, pedestrian walkways, and public open spaces to provide pedestrian orientation and to clearly identify a secure route between parking areas and points of entry into buildings;
- Design public spaces to be easily patrolled and accessed by safety personnel;
- Design entrances to, and exits from buildings, open spaces around buildings, and pedestrian walkways to be open and in view of surrounding sites; and
- Limit visually obstructed and infrequently accessed "dead zones."

4.12.9 ENVIRONMENTAL IMPACTS

Thresholds of Significance

In accordance with Appendix G of the CEQA Guidelines, the Proposed Project's impacts related to police protection facilities and services would be significant if the Housing Element Update would:

- **Threshold 4.12-2:** Result in substantial adverse physical impacts associated with the provision of new or physically altered police protection facilities, or the need for new or physically altered facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for police protection services.

Consistent with *City of Hayward v. Trustees of California State University* (2015; 242 Cal.App.4th 833), significant impacts under CEQA consist of adverse changes to physical conditions resulting from a project. Potential impacts on public safety services are not an environmental impact that CEQA requires a project applicant to mitigate: "[T]he obligation to provide adequate fire and emergency medical services is the responsibility of the city." (Cal. Const., art. XIII, § 35, subd. (a)(2) ["The protection of the 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."].) Therefore, while response times and standards for services are provided in the impact discussions below for Impact 4.12-2, they are provided for informational purposes and to provide an indication of potential need for new facilities, rather than as thresholds for significance.

Methodology

The analysis is based, in part, on the information provided by the LAPD and includes statistical data regarding police protection facilities and services and response times, and information from the LAPD website. This information is included in Appendix G of this Draft EIR. The LAPD also provided data upon request through the City's Public Record Request Portal.

This analysis focuses on determining whether the housing development accommodated under the Housing Element Update would result in adverse physical impacts to the environment due to the expansion of existing police protection facilities or construction of new facilities. Whether additional facilities would be required is determined primarily by considering the adequacy of existing police protection services and impacts of future residential development on demand for police protection services. Whether provision of new or expanded facilities would result in substantial adverse environmental effects is evaluated by considering the physical context in which facilities would be built, constraints on the size and number of new and/or expanded facilities, and an analysis of potential environmental impacts that would result from their construction.

Project Impacts and Mitigation Measures

Threshold 4.12-2	Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered police protection facilities, need for new or physically altered police protection facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for police protection?

Impact 4.12-2 Forecasted growth being accommodated by the Housing Element Update would increase demand for police protection service in the City, which could result in the need for new or expanded police protection facilities. Large residential and mixed-use projects with hundreds of units may require mitigation measures for police facilities to ensure that adequate police protection services are provided. The size and location of new facilities is not known at this time and future mitigation may prove infeasible. It is anticipated that new or expanded police stations could be needed based on the forecasted growth accommodated by build out of the RHNA during the plan horizon. It is also foreseeable that new or expanded police stations could be built without creating significant environmental impacts since new facilities would be of limited size and scale; however, site specific conditions are not known. Based upon the above, such impacts would be ***significant and unavoidable***.

Construction related to future residential development would have the potential to temporarily increase the demand on police services. Construction sites can pose a nuisance with respect to vandalism and theft. Road and lane closures due to construction activities related to individual development projects could affect response times of police vehicles. Traffic delays caused by potential closures could impede the ability of police vehicles to efficiently move along roadways to their destination. Additionally, temporary road closures may also result in detours that impact response time. However, any development project that would cause temporary road closures would be required to submit a plan to LADOT for approval to ensure any impacts are minimized and, if necessary, proper signage and flagmen provided to avoid impacts. In addition, large projects would be required to develop a construction staging and traffic management plan, as necessary, to ensure that emergency access is maintained and the construction sites are secure. In addition, construction activities under the Housing Element Update would not result in the need for expansion of existing police facilities or construction of new police facilities due to the temporary nature of construction.

Under the Housing Element Update, build out of the RHNA to accommodate forecasted growth and existing need would result in the construction of up to 420,327 housing units by 2029. A larger population could increase demand for LAPD services by increasing the opportunities for crime, though an increase in development intensity and residential density would not necessarily result in a directly proportional increase in crime. An area's crime rate is influenced by many factors, such as police presence, implementation of crime prevention measures, department funding, and socioeconomic factors. As discussed in the *Environmental Setting*, the LAPD handles an estimated 2,981,238 telephone calls for service per year and approximately 1,270,278 are non-emergency related. According to the 2020 Crime Statistics summary, there were 13,124 violent crimes, 43,981 property crimes, and 36,187 arrests in 2020 (LAPD 2021). To ensure that necessary police services, facilities, and equipment are provided for the public safety needs of all neighborhoods, demand for existing and projected police services and facilities is monitored and forecasted by LAPD in order to maintain standards. (Los Angeles Department of Building and Safety [LADBS] 2017). Accordingly, as development occurs over the life of the Housing Element Update, through 2029 police protection service levels would continue to be evaluated and maintained by LAPD in accordance with existing policies, procedures and practices. Individual developments in the City would be required to incorporate design features to deter crime. The LAMC and Los Angeles Building Code (LABC) include recently adopted requirements regarding lighting and/ or security locks and devices for residential uses, as well as outdoor lighting requirements for a variety of uses (e.g., LABC Chapter 67, 1029, 8697) (Los Angeles Department of Building and Safety [LADBS] 2017). Additionally, LAPD would review development project applications to determine the types of design features that the development project would need to incorporate to deter crime, consistent with the techniques of CPTED.

Meeting service standards could be affected by increased roadway congestion. While implementation of the project could impact roadway levels of service, there is not a direct relationship between predicted travel delay and emergency response times as California State law requires that drivers yield the right-of-way to emergency vehicles and remain stopped until the emergency vehicles have passed. Designated emergency and disaster routes in the City would be maintained. In addition, multi-lane arterial roadways allow emergency vehicles to travel at higher speeds and permit other traffic to maneuver out of the path of the emergency vehicle. In addition, as discussed in the impact discussion in Section 4.14, *Transportation*, various roadways in the City are equipped with a Fire Preemption System (FPS), a system that automatically turns traffic lights to green for emergency vehicles traveling on designated streets.

Additional demand for police service would need to be accommodated, at least in part, through the hiring of new patrol officers who would require office space and patrol cars. Although the exact types and locations of future new facilities are not known at this time, it is anticipated that new facilities would be small neighborhood facilities that could be accommodated in existing buildings or small new structures and could be developed without new significant environmental impacts beyond those described throughout this EIR. Police protection service levels would continue to be evaluated and maintained by LAPD in accordance with existing policies, procedures and practices as development occurs over the lifetime of the Housing Element Update.

According to LAPD, the average code one, or low priority, citywide unit response time in April 2021 was 28.2 minutes. Furthermore, there was a total of 6,515 low priority calls to LAPD. In contrast, there were a total of 1,927 code three, or very urgent, calls. The average citywide unit response time for these calls was 4.3 minutes (from Public Record Request Portal, see Appendix G). Similar to fire stations, the construction of new or expanded police stations would occur in an urbanized area and would be limited in number and size. New facilities would also be required to comply with applicable federal, State, and local regulations and policies discussed in this EIR, such as NPDES permit requirements, the City's Tree Ordinance and Noise Ordinance, and the California Building Code, including CALGreen requirements.

The types of housing units anticipated under the Housing Element Update would generally fall into five categories of development projects - multi-family residential development; single-family residential development; ADUs; mixed use development; and conversion and/or rehabilitation of existing nonresidential, residential, and mixed-use structures to be used for housing. A review of the housing development in the City in Table 4-2, shows that impacts associated with police protection services were less than significant for the majority of the developments reviewed. Of the 54 projects reviewed, nine large projects were found to require mitigation measures related to Police Services to reduce impacts to a level of less than significant. The potential to impact police protection services would vary according to project housing unit type and location. Further discussion of the potential impacts of these project types follows.

- **Multi-family residential:** Multi-family residential projects may range in size from small apartment buildings with 2-10 units to larger apartment buildings and high-rise structures with hundreds of units. Multi-family developments of any size would potentially increase the need for police facilities and services. Multi-family units could be located in areas throughout the City, and therefore, may substantially increase the need for services from existing facilities within the City. Developers would be required to comply with State and local regulations that include emergency access and safety. However, larger multi-family development projects would be primarily located in urbanized areas where there are existing police stations, and therefore, would likely result in more substantial impacts regarding response times and the need for police protection services considering that they would accommodate a higher density of housing units and create a greater demand on police protection services. As listed in Table 4-2, the Sapphire Project is a multi-family project that includes the construction of approximately 369 residential dwelling units in addition to 22,000 SF of retail floor area, in the Westlake Community Plan Area. It was found that the project would have potential impacts on police protection services without the implementation of required mitigation measures by LAPD. LAPD required mitigation measures such as a diagram of the project site to the Commanding Officer, consultation with the Crime Prevention Unit, and other measures. These mitigation measures reduced potential impacts to less than significant. The EIR provided the following:

  Construction

  Construction activities have the potential to affect emergency vehicle response by adding construction traffic to the street network and by partial lane closures during street improvements and utility installations. The impacts, while potentially adverse, would be less than significant for the following reasons: (1) Construction impacts are temporary in nature and do not cause lasting effects; and (2) Partial lane closures would not greatly affect emergency vehicles, the drivers of which normally have a variety of options for avoiding traffic, such as using their sirens to clear a path of travel or driving in the lanes of opposing traffic. Additionally, if there are partial closures to streets surrounding the Project Site, flagmen would be used to facilitate traffic flow until construction is complete. Moreover, as discussed in Section IV.K., Traffic/Transportation, the Applicant will be required to develop a Construction Traffic Control/Management Plan prior to construction to minimize the effects of construction on vehicular and pedestrian circulation (refer to MM K-1). As such, impacts associated with emergency response for police services during construction would be less than significant. When not properly secured, construction sites can attract criminal activity and adversely affect local law enforcement. The Proposed Project has the potential to adversely affect police services during the construction period due to an increased potential for trespassers, theft, and vandalism, which would potentially result in graffiti, excess trash, and potentially unsafe conditions for the public. Such occurrences would adversely affect the aesthetic character of the Project Site and surrounding area and could potentially cause public health and safety concerns. The construction of the Proposed Project would therefore present a

potentially significant impact on police protection services. With implementation of Mitigation Measure MM J.2-1, below, impacts to police services from construction activities would be less than significant.

Operation

The Proposed Project has the potential to place additional demands upon police protection services during operation as a result of the addition of the mixed-use residential and commercial development. However, the Project includes security/design features that would reduce the demand for police services to less than significant levels.

The Proposed Project would include the construction of approximately 369 multiple residential dwelling units and approximately 22,000 square feet of retail floor area. The Proposed Project would generate up to 1,148 new residents and approximately 38 employees. 15 16 While there is not a directly proportional relationship between increases in land use activity and increases in demand for police protection services, the number of calls requesting police responses to retail burglaries, vehicle burglaries, damage to vehicles, traffic related incidents of crimes against persons would be anticipated to increase with the increase in on-site activity and increase in traffic on adjacent streets and arterials. Such calls are typical of problems experienced in the existing neighborhoods, and do not represent unique law enforcement issues specific to the Proposed Project. However, any additional demands upon police protection services would be potentially significant. As a mixed-use project, the Proposed Project would provide an increased 24-hour community presence, which often has the result of reducing crime rates. The continuous presence of people and activity on-site is known to deter criminal activity as more eyes are on the street. To further reduce the potential for increased demand upon police services in the area, the Project would include strategically positioned low-level and security lighting to enhance public safety. Visually obstructed and infrequently accessed "dead zones" would be limited and, where possible, security would be controlled to limit public access. The building and layout design of the Proposed Project would also include crime prevention features, such as nighttime security lighting, full-time on-site professional security, security cameras monitored by on-site professional security, intrusion prevention systems and secure parking facilities. Furthermore, as identified under the Mitigation Measures subsection below, the Proposed Project would be required to implement safety measures as recommended by the LAPD, including consulting with the LAPD's Crime Prevention Unit regarding the incorporation of crime prevention features identified in the Los Angeles Police Department's Design Out Crime Guidelines. The Applicant would also submit a diagram of the Project Site to the LAPD's Rampart Commanding Officer that includes access routes and any additional information that might facilitate police response. With mitigation, the Project would not require new or expanded police facilities in order to maintain acceptable service, the construction of which could cause significant environmental impacts, and impacts related to police services would be reduced to less than significant levels.

- **Single-family residential:** Single-family residential projects may range in size and scale from smaller single-family homes to larger single-family homes, and from small-lot subdivisions to multi-property single-family subdivisions. Single-family developments of any size would cause an increase in the need for police protection services. Developers would be required to comply with State and local regulations that include police and safety requirements. Nonetheless, like most residential development anticipated under the Housing Element Update, new single-family developments would be primarily located in urbanized areas where available land is limited, and therefore, would have the potential to result in increased demand on existing police stations, potential increased delay in response times from that demand and need for new or expanded facilities. As listed in Table 4-2, an example of a typical single-family housing project, the 1209 6th Avenue EIR analyzed a Small-Lot development with two single-family units on a 5,005-square foot lot located in the Venice Community Plan area. The analysis in the Initial Study found that the potential impacts to police protection services were less than significant based on the following:

  The Project does not meet the City's screening criteria for a project with the potential to impact police services because the Project would not result in a net increase of 75 residential units, 100,000 square feet of commercial floor area, or 200,000 square feet of industrial floor area. Additionally, Project development would result in a minimal population increase which would allow the existing nearest police station, the Venice Beach Substation, to continue to be able to serve the Project Site and would not require additional staffing. Impacts would be less than significant and no further analysis is required in the EIR.

  Additionally, as listed in Table 4-2, the 2730 Onyx Drive Project analyzed a Small-Lot development with 32 single-family units on a 186,956 square foot undeveloped lot located in the Northeast Los Angeles Community Plan Area, near Rose Hill, within a VHFHSZ. The Project was found to have less than significant impacts to police protection services because the Project Site is in close proximity to the Hollenbeck Community Police Station and due to the minimal population increase, it was not anticipated that there would be a need to build a new or expand an existing police station to serve the Project and maintain acceptable service ratios, response times, or other performance objectives for police protection (MND 2014-3179 at p. 71).

  A less common example, would be a project, like that listed in Table 4-2, the Hidden Creeks Project discussed above, which is a large single family residential development consisting of 188 single family residences, a park, and an equestrian boarding facility on a 259-acre development site, in an unincorporated area adjacent to Porter Ranch. The project would introduce a 15.8-acre equestrian facility to encourage the use of trails near the project site. The EIR found that potential impacts to police protection services were reduced to less than significant by incorporating crime prevention features, a traffic routing plan and the submission of a project diagram to the Commanding Officer. Furthermore,

tax base and fees from vehicle registration payments from the new residents would also supply the police department with funds to support law enforcement staffing needs and equipment. The EIR impact analysis is summarized below:

> *Implementation of the project would result in the construction 188 residential units within the community of Chatsworth–Porter Ranch, which would result in a population increase of approximately 544 new residents. In the City of Los Angeles, there are currently 9,984 sworn officers10 for 4,041,707 residents,11 or 2.4702 sworn officers per 1,000 residents. With project implementation, additional residents would increase the demand for protective services provided by the City of Los Angeles. However, with project implementation, the officers-per-population ratio would experience a negligible decrease, to 2.47 officers per 1,000 residents. This minimal change in the officer-to-population ratio would not require the construction of new facilities or the alteration of existing facilities.*
>
> *Construction sites can be sources of attracting nuisances, providing hazards, and inviting theft and vandalism. However, in keeping with standard best practices, the project applicant would incorporate security features on the construction site, such as fencing and locked entrances; and lock or otherwise securely store construction equipment, tools and material within sheds and/or other inaccessible areas while not in use. Furthermore, the LAPD recommends that the project applicant consult with the LAPD's CPU regarding crime prevention features appropriate for the design of the project. Examples of crime prevention design features that could be implemented by this project include:*
>
> *Designing housing units to allow neighbors to "self-patrol" their environments; Installing fences around housing developments in ways that avoid creating hiding places for criminals; Placing vines or planted coverings on walls to deter graffiti. Thus, the project would not require the construction of new of physically altered facilities which could have impacts on the environment, and impacts to police protection services would be less than significant.*

- **ADUs:** ADUs are created through a building addition or conversion of existing floor area and detached ADUs of various scales, which are allowed in any zone that allows for residential use as well as on any site that contains an existing residential use. An ADU would result in one or more additional units on a property containing existing or proposed residential units. The development of ADUs involving new construction could potentially increase the need for police protection services, however, the increase in demand for existing police protection services would not be substantial as ADUs provide for modest increases in residential intensity in areas that are already served by police protection services.
- **Mixed use development:** Mixed use development could range in size and scale from neighborhood commercial mixed use with smaller nonresidential uses, to high-rise mixed-use with larger nonresidential uses. Mixed use developments of any size would cause an increase in the need for police

protection facilities. However, large-scale mixed use development projects would result in more substantial impacts to demand on police protection facilities considering that large mixed-use developments will presumably accommodate a greater number of housing units and thus create a greater demand on existing police resources. Developers would be required to comply with State and local regulations that include police and safety requirements. Nonetheless, large mixed-use developments would accommodate a greater density and therefore, would have greater potential to result in substantial impacts on response times and police protection services. As listed in Table 4-2, the Sunset and Gordon Mixed-Use Project is a recent example of a mixed-use development in the City of Los Angeles. The project includes the development of a 324,432-sf project including 311 multi-family residences, 53,500 sf of commercial space consisting of 40,000 sf of office and 13,500 sf of retail (including 8,500 sf of restaurant uses), 508 parking spaces, a 21,177-sf public park, and two super graphic signs in the Hollywood Community Plan Area. The project incorporates a security plan that must be reviewed and approved by the LAPD to reduce the potential demands of LAPD due to criminal activity at the project site. The impact analysis in the EIR is provided below:

Construction

Construction sites can be sources of nuisances, providing hazards and inviting theft and vandalism. Therefore, when not properly secured, construction sites can become a distraction for local law enforcement. The Certified EIR concluded the CRA Approved Project would result in less than significant impacts to police services during construction related to theft and vandalism with incorporation of mitigation measures. The Certified EIR determined under the CRA Approved Project's construction of a mixed-use development, a significant impact to police services could occur. However, the CRA Approved Project would employ mitigation measures IV.J.1-1 and IV.J.1-2, which require erecting temporary fencing around the construction site to discourage trespassers and deploying security guards to monitor the construction site and deter any potential criminal activity to reduce the impact to police services. With implementation of these mitigation measures, the Certified EIR concluded that the CRA Approved Project would have a less than significant impact to police services during construction.

The additional construction activities for the Modified Project could necessitate temporary lane closures on streets adjacent to the Project Site on a temporary and intermittent basis for utility relocations/hookups, delivery of materials, and other construction activities as may be required. A crane may be needed during the Modified Project's additional construction activities. This crane could be staged in one of three locations: at the parking lot to the east of the Project Site, within the closed public park site located immediately to the north of the parking structure podium, or in the easterly parking lane on Gordon Street fronting the Project Site. Site deliveries and the staging of all equipment and materials would be organized in the most efficient manner possible on-site to avoid any impacts to the neighborhood and surrounding traffic. It should be noted

that all construction equipment would be staged on-site or immediately adjacent to the Project Site throughout the duration of the Modified Project's additional construction activities. It is not expected that complete closures of any streets would be required during the additional construction activities.

The Modified Project would also implement Certified EIR Mitigation Measure MM IV.J.1-2.1, which ensures, prior to construction, the development of a Construction Traffic Control/Management Plan for the Modified Project to be approved by LADOT. With implementation of this mitigation measure, the Modified Project's construction-related traffic and temporary roadway or sidewalk closures would not result in substantial adverse physical impacts that would impact acceptable service ratios or response times or other performance objectives for police protection services because the Modified Project's construction would include design features to reduce the demand for police services and therefore impacts related to police services during the Modified Project's construction period would be less than significant. Accordingly, as compared to the CRA Approved Project, the proposed Modified Project would not involve new significant environmental effects or a substantial increase in the severity of previously identified significant effects related to police services during additional construction of the Modified Project due to construction-related traffic.

Operation

The Certified EIR concluded that the CRA Approved Project's operational impacts to police services during operation of the CRA Approved Project due to an increase in resident population would be less than significant with incorporation of mitigation measures. As described in the Certified EIR, the CRA Approved Project would introduce a net increase of approximately 722 new residents to the Project Site (with prior units removed). While there is not a directly proportional relationship between increases in land use activity and increases in demand for police protection services, the number of calls requesting police responses to home and retail burglaries, vehicle burglaries, damage to vehicles, traffic-related incidents, and crimes against persons would be anticipated to increase somewhat with the increase in onsite activity and increase in traffic on adjacent streets and arterials. The Certified EIR explained that the CRA Approved Project would provide an increased 24-hour community presence, which often has the result of reducing crime rates. Nevertheless, to reduce the potential for increasing the demands upon police services, the CRA Approved Project included mitigation measures MM IV.J.1-3.1 and MM IV.J.1- 3.2 providing for positioned functional and thematic lighting, nighttime security lighting, full-time onsite professional security, building security systems, and secure parking facilities, and an on-site security plan to reduce operational impacts to police services to a less than significant level.

Therefore, with implementation of the security plan (Certified EIR Mitigation Measure MM IV.J.1-3.1 and MM IV.J.1-3.2), the Modified Project's impacts upon police services would be less than significant,

consistent with the Certified EIR's analysis of the CRA Approved Project. Additionally, implementation of regulatory compliance measure CM J.1-1, which requires the Applicant to submit a diagram of each portion of the property to the Los Angeles Police Department's Crime Prevention Section prior to the issuance of any Certificate of Occupancy, would further reduce the Modified Project's impacts upon police services. Moreover, because of the decrease in the on-site residential population the Modified Project's impacts upon police services are the same or less than the CRA Approved Project's impacts upon police services. Accordingly, as compared to the CRA Approved Project, the proposed Modified Project would not involve new significant environmental effects or a substantial increase in the severity of previously identified significant effects related to police services during operation of the Modified Project due to the resident population.

- **Conversion and/or rehabilitation:** Existing nonresidential, residential, and mixed-use structures could be converted or rehabilitated for new residential uses. The conversion or rehabilitation of existing properties would generally not involve new construction but may result in full-time residents in structures that were previously not occupied by residents, such as adaptive reuse projects. Some conversion and/or rehabilitation projects can be small, such as a conversion of a duplex to a single-family home. Some can be quite large and involve both rehabilitation and new construction, such as the Crossroads Hollywood Project. Therefore, housing density and intensity could increase significantly as some conversion and/or rehabilitation projects could introduce new full-time residents and housing units to existing properties. In such cases, impacts would be similar as those identified for multi-family and/or mixed-use projects. Demand on existing police protection services could be substantial.

Based on a review of the case studies in Table 4-2, the majority of housing projects would not have impacts to polices services. Some larger scale projects, such as Sunset Gordon may be potentially significant without mitigation.

Although there are no current plans to construct new police stations/facilities or expand police stations/facilities, it is foreseeable that providing police services to the growth accommodated by the build-out of the RHNA will result in the need for new or expanded police facilities over the plan horizon.

Potential environmental impacts associated with construction and operation of new residential development have been evaluated throughout this EIR and would not be different for the construction of a LAPD station/facility. It is unlikely that impacts from the construction or operation of new or expanded police facilities in the City would have greater or different impacts than those identified in this EIR for construction or operations of housing development. It is unlikely, but possible, that, similar to other types of development, the construction of new or expanded police protection facilities could contribute to

significant impacts, such as to historical resource and construction noise identified in Sections 4.4, *Cultural Resources*, and 4.10, *Noise*, of this EIR. Should new facilities be needed, such facilities are anticipated to be infill developments surrounded by urban uses and would not require new or expanded infrastructure. Based on the urban character of the City, the construction of new police facilities or expansion of an existing facility would most likely result in a less-than-significant impact and or possibly qualify for an infill exemption. To the extent that any significant impacts could result from the unique characteristics of a specific site, those impacts would be speculative at this time. Furthermore, although it is possible that needed new community facilities could be developed without significant environmental effects beyond those identified in this EIR, the construction of a new LAPD facility or expansion of an existing facility would require separate project-specific environmental analysis to address any site-specific environmental concerns not identified in the EIR. In addition, as indicated by the review of previous projects above, large residential and mixed-use projects with hundreds of units may require additional mitigation measures for new facilities to ensure that adequate police protection services are provided. Therefore, impacts related to police protection services, would be ***potentially significant***.

Mitigation Measures

4.12-2(a): Crime Prevention Unit Consultation

Prior to the issuance of a building permit for a discretionary project with more than 300 units or on a project site of more than 10 acres, the project applicant shall consult with the Los Angeles Police Department's Crime Prevention Unit regarding the incorporation of crime prevention features appropriate for the design of the project, including applicable features in the Los Angeles Police Department's Design Out Crime Guidelines. The crime prevention features recommended by the Los Angeles Police Department's Crime Prevention Unit and agreed to by the project applicant during consultation shall be made part of the project. The plans shall incorporate the design guidelines relative to security, semipublic and private spaces, which may include but not be limited to access control to building, secured parking facilities, walls/fences with key systems, well-illuminated public and semi-public space designed with a minimum of dead space to eliminate areas of concealment, location of toilet facilities or building entrances in high-foot traffic areas, and provision of security guard patrol throughout the project site if needed. These measures shall be approved by the Police Department prior to the issuance of building permits.

4.12-2(b): Security During Construction

During construction of discretionary projects with more than 300 units or with more than 10 acres, private security personnel shall monitor vehicle and pedestrian access to the construction areas and patrol the project site, construction fencing with gated and locked entry shall be installed around the

perimeter of the construction site, and security lighting shall be provided in and around the construction site.

Furthermore, temporary construction fencing shall be placed along the periphery of the active construction areas to screen as much of the construction activity from view at the local street level and to keep unpermitted persons from entering the construction area. Low-level security lighting, and locked entry (e.g., padlock gates or guard-restricted access) shall be provided to limit access by the general public. Regular security patrols during non-construction hours shall also be provided. During construction activities, the contractor shall document the security measures; and the documentation shall be made available to the construction monitor.

Significance After Mitigation

Implementation of Mitigation Measures 4.12-2(a) and 4.12-2(b) would reduce demands on LAPD for police protection services. However, it is not feasible as a policy matter to impose the measures on ministerial projects based on the City resources needed to apply and enforce the new regulations on housing developments. Additionally, the measures may be infeasible for some discretionary housing projects. Moreover, build out of the RHNA to accommodate existing need and planned growth will foreseeably result in the need for new or expanded police facilities, which may be based on site specific conditions result in significant impacts. Based on this, impacts related to police protection services would remain ***significant and unavoidable***.

4.12.10 CUMULATIVE IMPACTS

The geographic area to analyze cumulatively considerable impacts to police services includes the City as well as areas at the City's periphery that could potentially be affected by construction of a new facility. In addition, cumulative development includes housing already approved and in the pipeline plus non-residential development through 2029.

Cumulative development throughout the City would increase overall demand for police service and may create the need for more officers and potentially new facilities. However, development projects within the City would be subject to review upon project submittal of the development application and may be required to provide security features, such as security cameras, private security services, and/or on-site police drop-in facilities that reduce the demand for police service. Future development would also be required to incorporate design elements relative to security, and semi-public and private spaces such as CPTED. These features may include, but not be limited to, access control to buildings, secured parking facilities, walls/fences with key systems, well-illuminated public and semi-public space designed with a minimum of dead space to eliminate areas of concealment, and location of toilet facilities or building

entrances in high-foot traffic areas. These measures would minimize the overall increase in demand for police protection services. The construction of new or expanded facilities may result in significant environmental effects and the impacts associated with the addition of police protection facilities. Any potential impacts from new facilities would be localized in nature and the addition of new facilities in specific locations would not result in significant cumulative impacts (i.e., the addition of multiple police protection facilities in various parts of the City would not result in additive effects at any given location). As demand for LAPD services increases, LAPD will act to maintain adequate service levels. In the event that cumulative development would result in the need for new or expanded LAPD facilities, the construction and operation of new facilities would not be expected to result in new or substantially different impacts from those impacts discussed in other sections of this EIR. For example, similar to construction noise and vibration impacts under the Housing Element Update, development of new facilities would also have the potential to result in significant and unavoidable construction noise and vibration impacts, particularly if individual police protection facilities are located adjacent to sensitive receivers. Nonetheless, the construction and operational impacts of new police facilities would be localized in nature and the addition of multiple new facilities in specific locations may have localized impacts, but would not result in significant additive or cumulative impacts (i.e., the addition of multiple police protection facilities in various parts of the City would not result in additive effects at any given location). Therefore, the incremental effect of the Housing Element Update related to police facilities would not be cumulatively considerable and cumulative impacts would be ***less than significant***.

Based on the above information, the incremental effect of the Housing Element Update with respect to police protection services would not be cumulatively considerable and cumulative impacts would be ***less than significant***.

PUBLIC SERVICES – SCHOOLS

4.12.11 INTRODUCTION

This section evaluates whether new or physically altered school facilities would be required to provide school services for the Housing Element Update, the construction of which could cause significant environmental impacts. As discussed in the Initial Study (Appendix A), the Proposed Project includes updates to the Safety Element to formally integrate related long-range planning efforts, which would not result in adverse impacts related to schools and such impacts are not discussed further in this analysis.

4.12.12 ENVIRONMENTAL SETTING

The Los Angeles Unified School District (LAUSD) serves an area totaling 710 square miles, including most of the City of Los Angeles and the entirety or portions of 26 cities and unincorporated areas of Los Angeles County (LAUSD 2020). LAUSD enrolled 557,560 students in pre-K through 12th grade for the 2019-2020 school year, an additional 29,799 students in other types of classes, and 83,515 students in early and adult education courses (LAUSD 2020). The District includes 19 primary schools, 441 elementary schools, 79 middle schools, 92 high schools, 54 option schools, 53 Magnet schools, 25 multi-level schools, 13 special education schools, 2 home/hospital schools, 239 K-12 Magnet centers (i.e., Magnet schools within regular campuses), 228 charter schools, and 142 other schools and centers.

LAUSD provides a number of programs that allow residents within LAUSD boundaries to attend schools outside of their residential community (LAUSD 2017a). Magnet schools offer a themed core-curriculum (e.g., business, communication arts, gifted/highly gifted/high ability, liberal arts, and visual and performing arts) and provide bus services for their students to promote greater ethnic and racial integration; the Capacity Adjustment Program (CAP) provides busing when a school reaches capacity and students need to be transported to another school; Permits with Transportation (PWT) provides busing for non-Anglo students to attend in a more integrated environment and vice versa; and Public School Choice/No Child Left Behind (PSC/ NCLB) offers busing for students who attend a Program Improvement School and wish to attend a non-Program Improvement School. Nevertheless, the majority of LAUSD students attend schools within their residential community. Enrollment is categorized as either "actual" or "resident" enrollment. Actual enrollment is the number of students attending the school at the start of the reported school year, including magnet students and resident enrollment is the total number of students living in the school's attendance area and who are eligible to attend at the start of the school year, plus any on-site magnet schools.

4.12.13 REGULATORY FRAMEWORK

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.[12]

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[13].

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 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.[14]

[12] California Education Code Section 17620(a)(1).
[13] State of California, Office of Public School Construction, School Facility Program Guide, October 24, 2012, https://www.dgs.ca.gov/-/media/Divisions/OPSC/Services/Guides-and-Resources/SFP_Hdbk_ADA.pdf?la=en&hash=B871984008A7D2E35D16DB50DDE0C87791C294A7. Accessed September 2020.
[14] California Government Code Section 65996.

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 LAUSD to apply to any regular, grade-appropriate LAUSD school with designated "open enrollment" seats. Open enrollment seats are granted through an application process that is completed before the school year begins. Under the Open Enrollment Policy, students living in a particular school's attendance area are not displaced by a student requesting an open enrollment transfer to that school.[15]

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.

Regional

Los Angeles Unified School District

As indicated above, the State is primarily responsible for the funding and structure of the local school districts, and in this case, LAUSD. As LAUSD provides education to students in many cities and county areas, in addition to the City, its oversight is largely a district-level issue. Public schools operate under the policy direction of elected governing district school boards (elected from the local area) as well as by local propositions which directly impact the funding of facility construction and maintenance. Pursuant to the Greene Act, LAUSD collects developer fees for new construction within its boundaries. The LAUSD School Facilities Needs Analysis has been prepared to support the school district's levy of the fees authorized by Section 17620 of the California Education Code. Payment of these fees would be mandatory for all housing development accommodated under the Housing Element Update, as applicable, and would fully mitigate any impact upon school services generated by the individual development projects[16].

LAUSD Strategic Plan 2016–2019

The LAUSD Strategic Plan 2016–2019 (Strategic Plan) represents the LAUSD's framework towards a commitment to 100 percent graduation. In following the Strategic Plan's fundamental strategy, the LAUSD will direct its efforts and resources to recruit, develop, and support principals and teachers in creating a learning environment that ensures 100 percent of students achieve and graduate. The Strategic Plan identified five main objectives: (1) Build a Solid Foundation for Early Learners; (2) Proficiency for All; (3) 100 Percent Attendance; (4) Parent, Community, and Student Engagement; and (5) School Safety. Furthermore, the Strategic Plan provides key initiatives to achieve these commitments from which implementation plans will be created. Plans will be structured to include specific action steps,

[15] LAUSD Open Enrollment Website at https://achieve.lausd.net/K12OpenEnrollment
[16] Los Angeles Unified School District, 2018 Developer Justification Study, March, 2018, https://achieve.lausd.net/cms/lib/CA01000043/Centricity/Domain/921/LAUSD%20Dev%20Fee%20Study%202018%20FINAL.pdf

responsibilities, and timelines. As such, the LAUSD will be able to monitor and measure progress and provide accountability during the Strategic Plan's implementation process.

LAUSD Choices Program

LAUSD provides education choices including magnet and permits with transportation (PWT) programs to students residing within the LAUSD boundaries. Students interested in enrolling in LAUSD magnet and PWT programs are required to apply through LAUSD Choices. Magnet schools under the Choice Program include business, communication arts, center for enriched studies, gifted/highly gifted/high ability, liberal arts, magnet schools assistance program, public service, science/technology/engineering/math, and visual and performing arts.[17]

Local

Los Angeles General Plan

Framework Element

Chapter 9, Infrastructure and Public Services of the Framework Element includes goals, objectives, and policies applicable to public schools; these are summarized in Table 4.12-6.

[17] LAUD, *e-Choices LAUSD Choices Program,* http://echoices.lausd.net//GeneralInformation.aspx, Accessed September 2016.

Table 4.12-6 Relevant General Plan School Goals, Objectives, and Policies

Framework Element – Chapter 9 Infrastructure and Public Services	
Goal 9N	Public schools that provide a quality education for all of the City's children, including those with special needs, and adequate school facilities to serve every neighborhood in the City so that students have an opportunity to attend school in their neighborhoods.
Objective 9.31	Work constructively with the Los Angeles Unified School District to monitor and forecast school service demand based upon actual and predicted growth.
Policy 9.31.1	Participate in the development of, and share demographic information about, population estimates.
Objective 9.32	Work constructively with Los Angeles Unified School District to promote the siting and construction of adequate school facilities phased with growth.
Policy 9.32.1	Work with the Los Angeles Unified School District to ensure that school facilities and programs are expanded commensurate with the City's population growth and development.
Policy 9.32.2	Explore creative alternatives for providing new school sites in the City, where appropriate.
Policy 9.32.3	Work with LAUSD to explore incentives and funding mechanisms to provide school facilities in areas where there is a deficiency in classroom seats.
Objective 9.33	Maximize the use of local schools for community use and local open space and parks for school use.
Policy 9.33.1	Encourage a program of decision-making at the local school level to provide access to school facilities by neighborhood organizations.
Policy 9.33.2	Develop a strategy to site community facilities (libraries, parks, schools, and auditoriums) together.
Source: City of Los Angeles 2001	

Community Plan

The Land Use Element of the City's General Plan includes 35 community plans. Community plans are intended to provide an official guide for future development and propose approximate locations and dimensions for land use. The community plans establish standards and criteria for the development of housing, commercial uses, and industrial uses, as well as circulation and service systems. The community plans implement the City's General Plan Framework at the local level and consist of both text and an accompanying generalized land use map. The community plans' texts express goals, objectives, policies, and programs to address growth in the community, including those that relate to schools required to support such growth. The community plans' maps depict the desired arrangement of land uses as well as street classifications and the locations and characteristics of public service facilities.

4.12.14 ENVIRONMENTAL IMPACTS

Thresholds of Significance

In accordance with Appendix G of the *CEQA Guidelines*, the Proposed Project's impacts related to school facilities and services would be significant if the Housing Element Update would:

- **Threshold 4.12-3:** Result in substantial adverse physical impacts associated with the provision of new or physically altered school 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 or other performance objectives for public schools.

Methodology

The analysis estimates the number of students that would be generated by the Housing Element Update based on LAUSD student generation rates and addresses whether LAUSD school facilities would have sufficient capacity to accommodate these students. The analysis discusses state-required developer mitigation fees and addresses all levels of educational facilities operated by LAUSD (i.e., elementary, middle, and high schools).

The following analysis focuses on determining whether the Housing Element Update would result in adverse physical impacts to the environment due to the expansion of existing school facilities or construction of new facilities. Whether additional facilities would be required is determined primarily by considering the adequacy of existing school facilities, impacts of the project on demand for school facilities, and applicable regulations and policies that would influence future provision of school facilities and allow for mitigation of potential environmental impacts.

For purposes of this EIR, a significant impact on schools would occur if the Proposed Project promotes growth patterns resulting in the need for and/or the provision of new or physically altered public school facilities (including charter schools), the construction of which would cause significant environmental impacts in order to maintain service, or other performance objectives. To the extent that the Housing Element Update causes impacts to classroom sizes or school service impacts that results in the construction of new facilities or alterations to existing facilities, and the impact from that construction results in a potential impact to the environment, that is a CEQA impact that needs to be assessed in this EIR. Discussion in this EIR that relates solely to the level of school services provided to the residents of the City, including any existing or future needs and deficiencies, is for informational purposes only. The ultimate determination of whether there is a significant impact related to schools is based on whether a significant impact will result from the construction of new or expanded school facilities.

The discussion of impacts to public schools' addresses impacts for the City. Public school service needs are dependent on the size of the service population and the geographic area served. This analysis estimates the number of students that would be generated by housing development accommodated under the Housing Element Update using LAUSD student generation rates and assesses whether existing and planned LAUSD school facilities expected to serve the City would have sufficient available capacity to accommodate the students (LAUSD 2008). If there would not be sufficient available capacity, the EIR considers whether new school facilities would be needed, and whether the construction of the school facilities would result in a significant environmental impact.

Regulatory Compliance Measures

The City has established regulatory requirements related to public services in the City. Housing development under the Proposed Project would be required to comply with the following RCM:

- **RCM-PS-1 (Payment of School Development Fee):** Prior to issuance of a building permit, the General Manager of the City of Los Angeles, Department of Building and Safety, or designee, shall ensure that the Applicant has paid all applicable school facility development fees in accordance with California Government Code Section 65995.

Project Impacts and Mitigation Measures

Threshold 4.12-3	Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered school facilities, need for new or physically altered school facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service or other performance objectives for public schools?

Impact 4.12-3 Housing development accommodated under the Housing Element Update would increase demand for schools in the City, which could result in the need for new or expanded school facilities. Construction of new schools could result in ***significant and unavoidable impacts***.

The purpose of the Housing Element Update is to comply with State housing element law requiring the City to show it has adequate land designated to accommodate the existing and projected housing needs reflected in the City's RHNA, which is based on measures of existing housing need and the regional population forecasts. State Housing Element Law requiring the City to accommodate the RHNA does not encourage or promote growth, but rather requires communities to address the existing population needs and projected growth while providing its fair share of the regional housing needs. Therefore, the Housing

Element Update would not directly affect local schools, but housing development accommodated under the Housing Element Update may increase the student population in certain locations and create the need for new or expanded school facilities.

It is reasonably foreseeable that over the eight-year planning period, the Housing Element Update would result in the need for and construction of new or expanded schools. If new or expanded schools are determined to be necessary during the life of the Housing Element Update, such facilities would occur where allowed under the designated land use and/or in proximity to residential uses. The environmental impacts of the construction and operation of new facilities, as an allowed land use, have been evaluated throughout this EIR. It is not foreseeable that impacts from building new schools or new additions to schools in the City would have greater or different impacts than those identified in this EIR for construction or operations. Depending on the location of new schools, if they are determined to be needed, impacts related to particular locations could occur, however such impacts are too speculative to assess without information as to design, location and proximity to the population to be served. Should new facilities be needed, such facilities are anticipated to be infill developments surrounded by urban uses, and would not require new or expanded infrastructure. Based on the urban location and size, the construction of new schools or expansion of an existing facility could result in less than significant impacts and or possibly qualify for an infill exemption. To the extent that any significant impacts could result from the unique characteristics of a specific project site, or specific characteristics of a given school (e.g., night lighting, performance spaces), those impacts would be speculative at this time. Furthermore, in the event that LAUSD constructs a new school or physically alter an existing facility, a project-specific environmental analysis would be required under CEQA to address site-specific environmental concerns.

Furthermore, the types of housing units anticipated under the Housing Element Update would generally fall into five categories of development projects - multi-family residential development; single-family residential development; ADUs; mixed use development; and conversion and/or rehabilitation of existing nonresidential, residential, and mixed-use structures to be used for housing. A review of the housing development in the City in Table 4-2, shows that impacts associated with schools were less than significant for the majority of the developments reviewed. None had significant unavoidable impacts. Of the 54 projects reviewed, only one large projects required mitigation measures and that was to pay school fees which is required by law. Further discussion of the potential impacts of these project types follows.

- **Multi-family residential:** Multi-family residential projects may range in size from small apartment buildings with 2-10 units to larger apartment buildings and high-rise structures with hundreds of units. Multi-family developments of any size would potentially increase the need for school facilities and services. Multi-family units could be located in areas throughout the City, and therefore, may substantially increase the need for services from existing schools within the City. Developers would be

required to comply with State and local regulations that include the payment of fees for schools. However, larger multi-family development projects would be primarily located in urbanized areas where there are existing schools, and therefore, would result in more substantial impacts considering that they would accommodate a higher number of housing units and create a greater demand on schools. As listed in Table 4-2, the 520 Mateo Project is an example of a multi-family development that resulted in less than significant impacts on schools. The project includes the demolition of two existing warehouses and the construction of 600 units. The Project population is estimated to be 1,662 persons. No mitigation measures were required.

- **Single-family residential:** Single-family residential projects may range in size and scale from smaller single-family homes to larger single-family homes, and from small-lot subdivisions to multi-property single-family subdivisions. Single-family developments of any size would cause an increase in the need for schools. Single-family projects of varying scales are likely to occur in lower-density residential areas as well as in higher-density, more urbanized areas. In addition, developers would be required to comply with State and local regulations that include require the payment of fees that may mitigate impacts regarding schools. Nonetheless, like most residential development anticipated under the Housing Element Update, new single-family developments would be primarily located in urban areas where available land is limited, and therefore, would be smaller developments and would be unlikely to result in substantial impacts on existing schools. There could be some limited potential for new single family home developments in previously undeveloped areas, such as with the Hidden Creek Project. As listed in Table 4-2, an example of this development type is the Hidden Creeks Project, which is a large single family residential development consisting of 188 single family residences, a park, and an equestrian boarding facility on a 259-acre development site. The EIR found that there was sufficient capacity at local schools and with implementation of existing regulations to pay school facility fees, impacts would be less than significant. (RDEIR at IV.L.3.5 to 6.)

- **ADUs:** ADUs are created through a building addition or conversion of existing floor area and detached ADUs of various scales, which are allowed in any zone that allows for residential use as well as on any site that contains an existing residential use. An ADU would result in one or more additional units on a property containing existing or proposed residential units. The development of ADUs involving new construction could potentially increase the need for schools, however, the increase in demand for schools would be minimal as ADUs provide for modest increases in residential intensity in areas that are already served by school services.

- **Mixed use development:** Mixed use development could range in size and scale from neighborhood commercial mixed use with smaller nonresidential uses, to high-rise mixed-use with larger nonresidential uses. Mixed use developments of any size would cause an increase in the need for schools. However, large-scale mixed use development projects would result in more substantial

impacts to schools considering that large mixed-use developments will presumably accommodate a greater number of housing units and thus create a greater demand on existing schools. Furthermore, developers would be required to comply with State and local regulations that include the payment of fees prior to development that may mitigate potential impacts regarding schools. Nonetheless, large mixed-use developments would accommodate a greater density and therefore, would have greater potential to result in substantial impacts on schools. As listed in Table 4-2, the 340 S Hill St. Equity Residential Project is an example of a Mixed-Use project. The Sustainable Communities Environmental Assessment found that no mitigation measures were required and impacts would be less than significant based on the payment of required school facility fees. (ENV-2015-0982-SCEA at p. V-183.)

- **Conversion and/or rehabilitation:** Existing nonresidential, residential, and mixed-use structures could be converted or rehabilitated for new residential uses. The conversion or rehabilitation of existing properties would generally not involve new construction but may result in full-time residents in structures that were previously not occupied by residents, such as adaptive reuse projects. Some conversion and/or rehabilitation projects can be small, such as a conversion of a duplex to a single-family home. Some can be quite large and involve both rehabilitation and new construction, such as the Crossroads Hollywood Project. Therefore, housing density and intensity could increase significantly as some conversion and/or rehabilitation projects could introduce new full-time residents and housing units to existing properties. In such cases, impacts would be similar as those identified for multi-family and/or mixed-use projects. Demand on existing schools could be substantial.

All development in California is subject to California Government Code Section 65995, which allows LAUSD to collect impact fees from developers of new residential and commercial/industrial space. These fees are collected on residential and commercial development and may be used to pay for all of the following: land (purchased or leased) for school facilities, design of school facilities, permit and plan checking fees, construction or reconstruction of school facilities, testing and inspection of school sites and school buildings, furniture for use in new school facilities, and interim school facilities (purchased or leased) to house students generated by new development while permanent facilities are constructed. Such development would assist in funding efforts necessary to alleviate school overcrowding and would require new development under the Housing Element Update to pay its share of the cost of accommodating additional students.

Potential environmental impacts associated with construction and operation of new residential development have been evaluated throughout this EIR and would not be different for the construction of a school facility. It is unlikely that impacts from the construction or operation of new or expanded school facilities in the City would have greater or different impacts than those identified in this EIR for construction or operations. It is unlikely, but possible, that, similar to other types of development, the

construction of new or expanded school facilities could contribute to significant impacts, such as those to historical resource and construction noise identified in Sections 4.4, *Cultural Resources*, and 4.10, *Noise*, of this EIR. Should new facilities be needed, such facilities are anticipated to be infill developments surrounded by urban uses and would not require new or expanded infrastructure. Based on the urban character of the City, the construction of new school facilities or expansion of an existing facility would most likely result in a less-than-significant impact and/or possibly qualify for an infill exemption. To the extent that any significant impacts could result from the unique characteristics of a specific site, those impacts would be speculative at this time. Furthermore, although it is possible that needed new community facilities could be developed without significant environmental effects beyond those identified in this EIR, the construction of a new school facility or expansion of an existing facility would require separate project-specific environmental analysis to address any site-specific environmental concerns not identified in the EIR. Therefore, impacts related to schools, would be ***potentially significant.***

Mitigation Measures

The City will continue to collect school facilities fees. No mitigation measures have been identified. Additionally, school construction is under the jurisdiction of LAUSD.

Significance After Mitigation

Significant and unavoidable.

4.12.15 CUMULATIVE IMPACTS

The geographic area to analyze cumulatively considerable impacts to schools includes the entire school district which includes the entire City as well as adjacent areas that are served by LAUSD that could be affected by the construction of new school facilities. Based on the fact that the Housing Element Update is accommodating the RHNA, which accommodates existing forecasted population and households from the latest SCS/RTP, the forecasted population and households for the horizon year of the Housing Element Update of 2029 is expected to be 4,309,231 and 1,577,966 respectively. These forecasts are based on interpolating the 2045 forecasted population and household numbers from SCAG's 2020-2045 RTP/SCS for the year 2029.

Cumulative development throughout Los Angeles would increase overall demand for public schools and potentially create a need for new facilities. Depending on the design and location of new schools, if they are determined to be needed, construction and operational impacts (such as traffic, noise, and lighting) could occur. However, impacts related to specific locations would be speculative at this time and would be generally consistent with other allowed development analyzed in this EIR. Furthermore, the construction

and operation of new or expanded school facilities in the City may have localized impacts, but individual facilities would not contribute to any additive cumulative or regional impacts. In addition, pursuant to Government Code Section 65996, the payment of 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. LAUSD also must perform separate CEQA review for new or expanded schools. Therefore, the incremental effect of the Housing Element Update with respect to schools would not be cumulatively considerable.

Based on the above information, the incremental effect of the Housing Element Update with respect to schools would not be cumulatively considerable and cumulative impacts would be ***less than significant***.

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4.13 RECREATION

This section evaluates potential environmental impacts from the Housing Element Update related to recreational resources. Topics addressed include the potential deterioration of existing facilities and the need for new recreational facilities, the construction of which could result in significant environmental impacts. Impacts from the Safety Element were found to be less than significant in the Initial Study (See Appendix A).

4.13.1 ENVIRONMENTAL SETTING

Existing Parks

The City of Los Angeles Department of Recreation and Parks (RAP) owns and operates parks and recreational facilities throughout the City, which include over 16,000 acres of parkland with over 444 park sites (RAP 2020a). The types of parks in the City range from smaller "pocket" parks to neighborhood serving parks and community parks. The breakdown of the park classifications is based primarily on size, as listed below.

- Mini parks (also known as pocket parks) – based on acreage totals for parks less than 1 acre in size
- Neighborhood parks – based on acreage totals for parks 1 – 10 acres in size
- Community parks – based on acreage totals for parks 10 – 50 acres in size
- Regional and large urban parks – based on acreage totals for parks 50+ acres in size; includes sport parks

While the sizes and types are parks are meant to serve the areas adjacent to these parks, residents often use parks, parkland, and recreational facilities in areas outside of their general community. The general locations of citywide parks are shown in Figure 4.13-1.

According to the City's *Public Recreation Plan*, the service radius for a neighborhood park (including mini parks) is 0.5 mile and a minimum of two acres should be provided per every 1,000 residents; the service radius for a community park is two miles and a minimum of two acres should be provided per every 1,000 residents; and a minimum of six acres of regional parks should be provided for every 1,000 residents (Los Angeles 1980). Table 4.13-1 shows the non-regional and regional parkland ratios based on the 2020 citywide population of 3,923,341 persons and over 16,000 available acres of parkland, which, includes regional parks, recreation centers, pools and bathhouses, senior centers, lakes, trails, picnic areas, and playgrounds (RAP 2018). As shown in in Table 4.13-1, the available parkland does not meet the City standard for adequate park acreage.

Figure 4.13-1 Parks in the City of Los Angeles

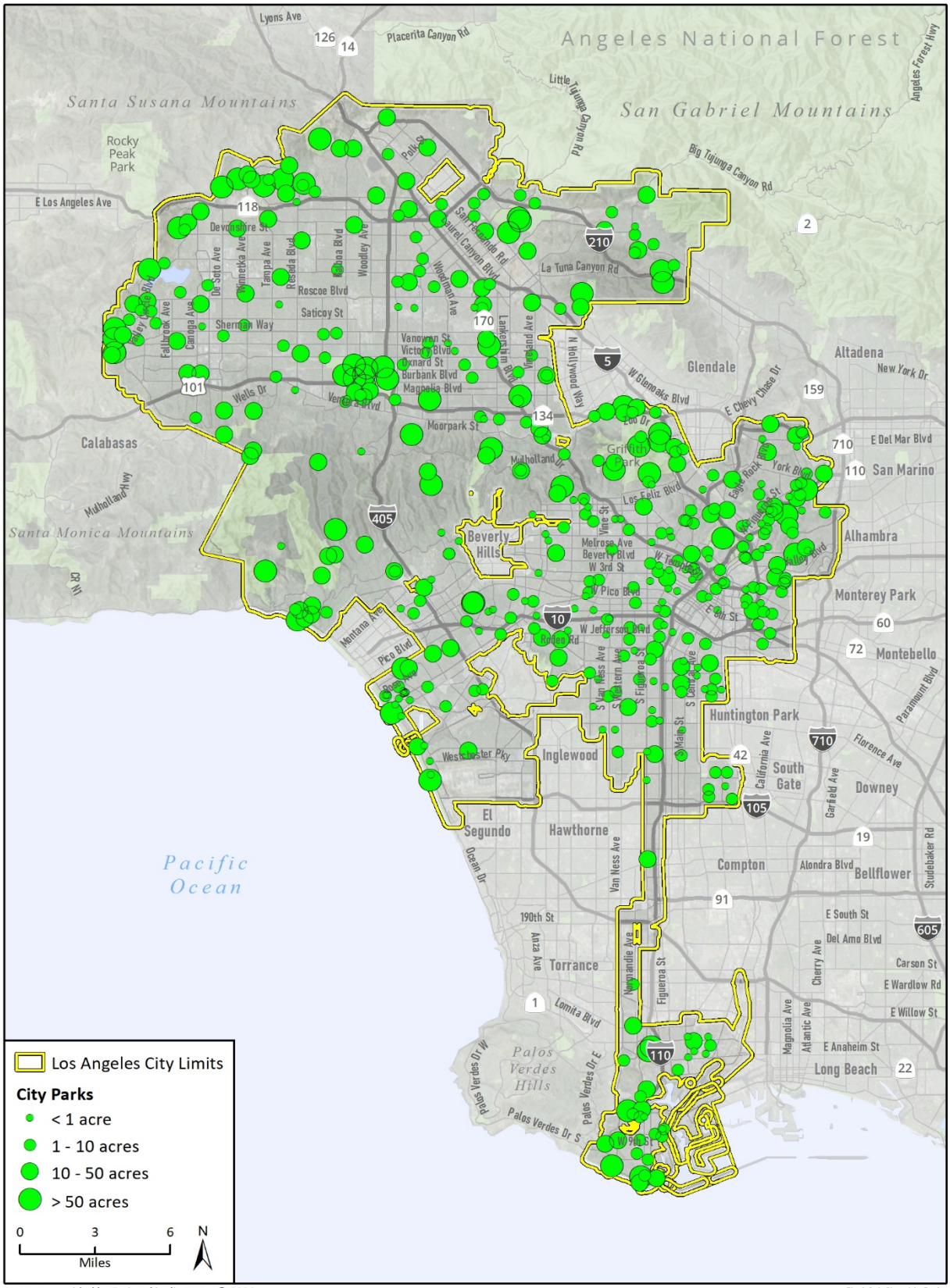
Angeles National Forest
Santa Susana Mountains
San Gabriel Mountains
Santa Monica Mountains
Pacific Ocean
Rocky Peak Park
Griffith Park
Palos Verdes Hills
Los Angeles City Limits
City Parks
< 1 acre
1 - 10 acres
10 - 50 acres
> 50 acres
0 3 6
Miles
N
Beverly Hills
Glendale
Burbank
Pasadena
Altadena
San Marino
Alhambra
Monterey Park
Montebello
Huntington Park
South Gate
Downey
Inglewood
El Segundo
Hawthorne
Torrance
Compton
Bellflower
Long Beach
Lakewood
Calabasas
Lyons Ave
Placerita Canyon Rd
Little Tujunga Canyon Rd
Big Tujunga Canyon Rd
Angeles Forest Hwy
E Los Angeles Ave
Devonshire St
Roscoe Blvd
Saticoy St
Sherman Way
Vanowen St
Victory Blvd
Oxnard St
Burbank Blvd
Magnolia Blvd
Moorpark St
Mulholland Dr
Mulholland Hwy
Wells Dr
Ventura Blvd
Woodman Ave
Laurel Canyon Blvd
San Fernando Rd
La Tuna Canyon Rd
N Hollywood Way
W Glenoaks Blvd
E Chevy Chase Dr
Los Feliz Blvd
Vine St
Melrose Ave
Beverly Blvd
W 3rd St
W Pico Blvd
W Jefferson Blvd
Rodeo Rd
Pico Blvd
Montana Ave
Westchester Pky
Ocean Dr
Van Ness Ave
Western Ave
S Fiqueroa St
S Main St
S Central Ave
California Ave
Garfield Ave
Paramount Blvd
Florence Ave
Alondra Blvd
Studebaker Rd
190th St
Normandie Ave
Figueroa St
Lomita Blvd
Palos Verdes Dr E
Palos Verdes Dr S
Palos Verdes Dr W
Del Amo Blvd
E South St
Carson St
E Wardlow Rd
E Willow St
E Anaheim St
Cherry Ave
Magnolia Ave
Atlantic Ave
Long Beach
Del Mar Blvd
New York Dr
York Blvd
Eagle Rock Blvd
Colorado Blvd
Valley Blvd
Foothill Blvd
Sierra Madre Blvd
Lake Ave
Rosemead Blvd
Del Mar

Table 4.13-1 City of Los Angeles Parkland Ratios

Total Existing Parkland Acres[1]	Population[2]	Acres per 1,000 Persons	Standard	Meets Standard?
Non-regional: 3,790	3,923,341	0.97	4 acres of non-regional parkland per 1,000 persons	No
Regional: 12,366		3.15	6 acres of regional parkland per 1,000 persons	No

[1] 2009 RAP
[2] California Department of Finance (DOF) 2021

The *Los Angeles Countywide Comprehensive Park & Recreation Needs Assessment*, published by the Los Angeles County Department of Parks and Recreation (LA County DPR), evaluated recreational needs in Los Angeles County, including the City of Los Angeles. The report identifies many areas of the City as having a "Very High" park need (average of 0.7 acres per 1,000 residents of park land) or "High" park need (average of 1.6 acres per 1,000 residents) (LA County DPR 2016).

The *2009 Community-Wide Needs Assessment* also includes a discussion of existing parkland totals and ratios. While the ratios provided in Table 4.13-1 do not include regional park outside of the City limits, regional parks in the greater Los Angeles area and passive areas contribute to usable recreational space and were considered in the Community-Wide Needs Assessment. A breakdown of parks and recreational space totals is shown in Table 4.13-2.

Table 4.13-2 City of Los Angeles Parks and Recreation

Category	Total Acreage	Acres per 1,000 Persons	Recommended Standard[1]	Meets Standard?
Mini Parks[2]	50.5	0.01	0.1	No
Neighborhood Parks[3]	773.7	0.20	1.5	No
Community Parks[4]	2,966.4	0.76	2.0	No
Regional/Large Urban Parks[5]	32,288.9	8.23	6.0	Yes
Total[6]	**36,079.6**	**9.20**	**9.6**	**No**

[1] The standards listed in this table are preliminary recommended service levels considering potential challenges associated with the acquisition of parkland, including acquisition costs and/or opportunity costs.
[2] 94.7 percent of total mini park acreage inventoried is City owned
[3] 94 percent of total neighborhood park acreage inventoried is City owned
[4] 87.3 percent of total community park acreage inventoried is City owned
[5] 38.3 percent of total regional/large urban park acreage inventoried is City owned
[6] 43.6 percent of total inventoried acreage is City owned
Source: 2009 RAP Community-Wide Needs Assessment

As shown in Table 4.13-2, there are approximately 36,000 acres of a useable recreational space in the City, including mini, neighborhood, community, and regional and large urban parks. A large portion of the regional and large urban park acreage is attributed to space not owned by the City, such as, but not limited to: the Santa Monica Mountain Conservancy, Angeles National Forest, Topanga State Park, and Santa Susana Pass State Historic Park. While these totals are illustrated for informational purposes, the analysis in this section focuses primarily on the parkland ratios shown in Table 4.13-1, which are based on parkland owned and operated by the City.

Recreational Facilities

The RAP oversees hundreds of athletic fields, 422 playgrounds, 321 tennis courts, 184 recreation centers, 72 fitness areas, 62 swimming pools and aquatic centers, 30 senior centers, 26 skate parks, 13 golf courses, 12 museums, and nine dog parks (RAP 2020a). The location of parks and recreational areas owned and operated by the City is shown on Figure 4.13-1. The RAP supports the City's urban wilderness and open spaces by maintaining and caring for 13 lakes, 92 miles of hiking trails, and operates 187 summer youth camps. Further details on recreational facilities in the City are as follows:

- **Citywide Aquatics and Swimming Pools.** The RAP Aquatics Division offers families and community members healthy, affordable and safe aquatic activities at their public pools, lakes and beaches. The Aquatics Division operates 39 seasonal swimming pools, 16 year-round swimming pools and three camp pools, and three Los Angeles Unified School District pools. In addition, the City operates 11 open water facilities, which are open year-round, offering fishing, paddle boating and small craft programs.
- **Lakes, Fishing, and Beaches.** The RAP Aquatics Division offers families and community members many healthy, affordable, and safe aquatic activities at their public pools, lakes, and beaches. Open water facilities where fishing is not allowed include: Del Rey Lagoon, Debs Lake, and Echo Park Lake. Open water facilities where fishing is permitted include: Cabrillo Beach, Hansen Dam Aquatic Center, Hollenbeck Lake, Lake Balboa, Lincoln Park Lake, Macarthur Park Lake, and Ken Malloy Harbor Park Lake.
- **Campgrounds.** The RAP provides a variety of residential camping opportunities, such as Camp Hollywoodland and Griffith Park Boy's Camp. Both Griffith Park Boys' Camp and Camp Hollywoodland for Girls facilities are American Camping Association (ACA) accredited and offer beautiful urban forest environments in the middle of Los Angeles. In addition, numerous campgrounds are available to the public in the greater Los Angeles County area, such as in the Angeles National Forest and San Bernardino National Forest.
- **Dog Parks.** Several dog parks are located throughout the City. These include, but are not limited to, the following: Eagle Rock, Glen Alla, Griffith Park, Hermon Park in the Arroyo Seco, Laurel Canyon,

Runyon Canyon, Sepulveda Basin Off-leash, Silverlake, Veterans' Barrington Park, Westminster, Westwood, Whitnall Off-leash.

- **Parks and Recreation Facilities.** The RAP maintains safe parks and recreation facilities providing the public with a wide variety of recreational opportunities. All municipally owned facilities are operated by the RAP. RAP property that includes aquatic centers, recreation centers, pre-school age license childcare centers, senior citizen centers and other centers are listed in Table 4.13-3. Many of these recreation centers have picnic areas, sports fields, and other park features. Figure 4.13-1 also shows the locations of these facilities.

Table 4.13-3 Recreational Facilities Serving the City

Recreational Facilities Serving the City	
109th Street Recreation Center 1464 East 109th St., Los Angeles, CA 90059	Lincoln Heights Youth Center 2911 Altura Street, Los Angeles, CA 90031
Algin Sutton Recreation Center 8800 South Hoover St., Los Angeles, CA 90044	Lincoln Park Recreation Center/Senior Citizen Center 3501 Valley Blvd., Los Angeles, CA 90031
Alpine Recreation Center 817 Yale St., Los Angeles, CA 90012	Loren Miller Recreation Center 2717 Halldale Ave., Los Angeles, CA 90018
Andres And Maria Cardenas Recreation Center (A.K.A. Blythe Street Park) 14740 Blythe St., Panorama City, CA 91402	Lou Costello Jr. Recreation Center 3141 East Olympic Boulevard, Los Angeles, CA 90023
Augustus F. Hawkins Nature Park 5790 Compton Ave., Los Angeles, CA 90011	Macarthur Park Recreation Center 2230 W. 6th St., Los Angeles, CA 90057
Balboa Sports Complex 17015 Burbank Blvd., Encino, CA 91316	Mar Vista Recreation Center 11430 Woodbine Ave., Los Angeles, CA 90066
Baldwin Hills Recreation Center 5401 Highlight Pl., Los Angeles, CA 90016	Martin J. Bogdanovich Recreation Center 1920 Cumbre Dr. San Pedro, CA 90732
Banning Recreation Center 1331 Eubank Ave., Wilmington, CA 90744	Pan Pacific Park Recreation Center 7600 Beverly Blvd., Los Angeles, CA 90036
Barrington Recreation Center 333 S. Barrington Ave., Los Angeles, CA 90049	Panorama Recreation Center 8600 Hazeltine Ave., Panorama City, CA 91402
Bellevue Recreation Center 826 Lucile Ave., Los Angeles, CA 90026	Pecan Recreation Center 145 S. Pecan St., Los Angeles, CA 90033
Boyle Heights Sports Center 933 S. Mott St., Los Angeles, CA 90023	Peck Park Community Center 560 North Western Ave., San Pedro, CA 90732
Branford Recreation Center 13306 Branford St., Arleta, CA 91331	Penmar Recreation Center 1341 Lake St., Venice, CA 90291
Cabrillo Beach Bath House 3800 Stephen M. White Drive, San Pedro, CA 90731	Poinsettia Recreation Center 7341 Willoughby Ave., Los Angeles, CA 90046
Carlin G. Smith Recreation Center 511 W. Ave. 46, Los Angeles, CA 90065	Queen Anne Recreation Center 1240 West Blvd., Los Angeles, CA 90019

Recreational Facilities Serving the City	
Central Park Recreation Center 1357 E. 22nd St., Los Angeles, CA 90011	Ramon Garcia Recreation Center, Msgr. (Formerly Fresno Park Recreation Center) 1016 S. Fresno St., Los Angeles, CA 90023
Chatsworth Recreation Center 22360 Devonshire St., Chatsworth, CA 91311	Ramona Hall Community Center 4580 North Figueroa St., Los Angeles, CA 90065
Cheviot Hills Recreation Center 2551 Motor Ave., Los Angeles, CA 90064	Rancho Cienega Sports Complex 5001 Rodeo Rd., Los Angeles, CA 90016
Chevy Chase Recreation Center 4165 Chevy Chase Dr., Los Angeles, CA 90039	Reseda Recreation Center 18411 Victory Blvd., Reseda, CA 91335
Crestwood Hills Recreation Center 1000 Hanley Ave., Los Angeles, CA 90049	Rio De Los Angeles State Park (A.K.A. Taylor Yard) 1900 N. San Fernando Rd., Los Angeles, CA 90065
Culver Slauson Recreation Center 5072 S Slauson Ave., Culver City, CA 90230	Ritchie Valens Recreation Center 10736 Laurel Canyon Blvd., Pacoima, CA 91331
Cypress Park And Recreation Center 2630 Pepper Ave., Los Angeles, CA 90065	Robertson Recreation Center 1641 Preuss Rd., Los Angeles, CA 90035
Cypress Park Club House 3320 Pepper Ave., Los Angeles, CA 90065	Rose Hill Recreation Center 4530 Mercury Ave., Los Angeles, CA 90032
Daniels Field Sports Center 845 West 12th St., San Pedro, CA 90731	Rosecrans Recreation Center 840 W. 149th St., Gardena, CA 90247
David M. Gonzales Recreation Center Aka Pacoima 10943 Herrick Ave, Pacoima, CA 91331	Ross Snyder Recreation Center 1501 East 41st St., Los Angeles, CA 90011
Delano Recreation Center 15100 Erwin St., Van Nuys, CA 91411	Rustic Canyon Recreation Center 601 Latimer Rd., Santa Monica, CA 90402
Denker Recreation Center 1550 W. 35th Place, Los Angeles, CA 90018	Saint Andrews Recreation Center 8701 St. Andrews Pl., Los Angeles, CA 90047
Devonshire House 18300 Lemarsh St., Northridge, CA 91325	Seoul International Park (Ardmore Recreation Center) 3250 San Marino St., Los Angeles, CA 90006
Downey Recreation Center 1772 N. Spring St., Los Angeles, CA 90031	Sepulveda Basin Recreation Area 17017 Burbank Blvd., Encino, CA 91316
Eagle Rock Recreation Center 1100 Eagle Vista Dr., Los Angeles, CA 90041	Sepulveda Recreation Center 8825 Kester Avenue, Panorama City, CA 91402
East Wilmington Greenbelt Community Center 918 North Sanford Ave., Wilmington, CA 90744	Shadow Ranch Recreation Center 22633 Vanowen St., West Hills, CA 91307
Echo Park Recreation Center 1632 Bellevue Ave., Los Angeles, CA 90026	Shatto Recreation Center 3191 W. 4th St., Los Angeles, CA 90020
El Sereno Recreation Center 4721 Klamath St., Los Angeles, CA 90032	Silver Lake Recreation Center 1850 W. Silver Lake Dr., Los Angeles, CA 90026
Elysian Park Recreation Center 929 Academy Rd., Los Angeles, CA 90012	Slauson Multipurpose Center 5306 South Compton Ave. Los Angeles, CA 90011
Elysian Valley Recreation Center 1811 Ripple St., Los Angeles, CA 90039	South Los Angeles Sports Activity Center 7020 S. Figueroa St. Los Angeles, 90003
Encino Community Center 4935 Balboa Blvd., Encino, CA 91316	South Park Recreation Center (A.K.A. Barry White) 345 E. 51st St., Los Angeles, CA 90011

Recreational Facilities Serving the City	
Evergreen Recreation Center 2844 East 2nd St., Los Angeles, CA 90033	South Seas House 2301 W. 24th St., Los Angeles, CA 90018
Expo Center - Roy A. Anderson Recreation Center 3980 Bill Robertson Lane, Los Angeles, CA 90037	State Street Recreation Center 716 N. State St., Los Angeles, CA 90033
Fernangeles Recreation Center 8851 Laurel Canyon Blvd., Sun Valley, CA 91352	Stonehurst Recreation Center 9901 Dronfield St., Sun Valley, CA 91352
Fred Roberts Recreation Center 4700 South Honduras St., Los Angeles, CA 90011	Stoner Recreation Center 1835 Stoner Ave., Los Angeles, CA 90025
Gilbert W. Lindsay Recreation Center 429 E. 42nd Place, Los Angeles, CA 90011	Studio City Recreation Center 12621 Rye St., Studio City, CA 91604
Glassell Park Recreation Center And Youth Center 3650 Verdugo Rd., Los Angeles, CA 90065	Sun Valley Recreation Center 8133 Vineland Ave., Sun Valley, CA 91352
Granada Hills Recreation Center Aka Petit Park 16730 Chatsworth St., Granada Hills, CA 91344	Sunland Recreation Center 8651 Foothill Blvd., Sunland, CA 91040
Green Meadows Recreation Center 431 E. 89th St., Los Angeles, CA 90003	Sylmar Park Recreation Center 13109 Borden Ave., Sylmar, CA 91342
Harbor City Recreation Center 24901 Frampton Ave., Harbor City, CA 90710	Tarzana Recreation Center 5655 Vanalden Ave., Tarzana, CA 91356
Harbor Sports Center 1221 N. Figueroa Place, Wilmington, CA 90744	Toberman Recreation Center 1725 Toberman St. Los Angeles, CA 90015
Hazard Recreation Center 2230 Norfolk St., Los Angeles, CA 90033	Trinity Recreation Center 2415 Trinity St., Los Angeles, CA 90011
Highland Park Recreation Center 6150 Piedmont Ave., Los Angeles, CA 90042	Valley Plaza Recreation Center 12240 Archwood St., North Hollywood, CA 91606
Hjelte Sports Center 16200 Burbank Blvd., Encino, CA 91436	Van Ness Recreation Center 5720 2nd Ave., Los Angeles, CA 90043
Hollenbeck Recreation Center 415 S. St. Louis St., Los Angeles, CA 90033	Van Nuys Recreation Center 14301 Vanowen Ave., Van Nuys, CA 91405
Hollywood Recreation Center 1122 Cole Ave., Los Angeles, CA 90038	Van Nuys Sherman Oaks Recreation Center 14201 Huston St., Sherman Oaks, CA 91423
Hoover Recreation Center 1010 W. 25th St., Los Angeles, CA 90007	Venice Beach Recreation Center and Ocean Front Walk (Boardwalk) 1800 Ocean Front Walk, Venice, CA 90291
Hubert H. Humphrey Recreation Center 12560 Filmore St., Pacoima, CA 91331	Victory Vineland Recreation Center 11117 Victory Blvd., North Hollywood, CA 91606
Imperial Courts Recreation Center 2250 E. 114th St., Los Angeles, CA 90059	Vineyard Recreation/Senior Citizen Center 2942 Vineyard Ave., Los Angeles, CA 90016
Jackie Tatum/Harvard Recreation Center 1535 West 62nd St., Los Angeles, CA 90047	Wabash Recreation Center 2765 Wabash Ave., Los Angeles, CA 90033
Jim Gilliam Recreation Center 4000 S. La Brea Ave., Los Angeles, CA 90008	West Hills Sports Center/Adam Bischoff Soccer Fields 6900 Valley Circle Drive, West Hills, CA 91307
Laces Recreation Center 5931 West 18th St., Los Angeles, CA 90035	Westchester Recreation Center 7000 W. Manchester Ave., Los Angeles, CA 90045

Recreational Facilities Serving the City	
Lafayette Multipurpose Community Center 625 South Lafayette Park Place, Los Angeles, CA 90057	Westwood Recreation Center 1350 Sepulveda Blvd., Los Angeles, CA 90025
Lake Street Community Center 227 N. Lake St., Los Angeles, CA 90026	Wilmington Recreation Center 325 N. Neptune Ave., Wilmington, CA 90744
Lake View Terrace Recreation Center 11075 Foothill Blvd., Lake View Terrace, CA 91342	Winnetka Recreation Center 8401 Winnetka Ave., Winnetka, CA 91306
Lanark Recreation Center 21816 Lanark St., Canoga Park, CA 91304	Woodland Hills Recreation Center 5858 Shoup Ave., Woodland Hills, CA 91367
Leland Recreation Center 863 S. Herbert Ave., San Pedro, CA 90731	Yosemite Recreation Center 1840 Yosemite Dr., Los Angeles, CA 90041
Lemon Grove Recreation Center 4959 Lemon Grove Ave., Los Angeles, CA 90029	Yucca Community Center 6671 Yucca St., Hollywood, CA 90028
Lincoln Heights Recreation Center 2303 Workman St., Los Angeles, CA 90031	
Source: LARAP 2020a	

Park Planning Efforts

2009 Citywide Community Needs Assessment

The RAP conducted the Citywide Community Needs Assessment as the first step in the preparation of the Citywide Recreation and Parks Master/Strategic Plan and a Five-Year Capital Improvement Plan. The Needs Assessment identifies, quantifies, and preliminarily prioritizes the tremendous need for recreation and open space in the City. A high-level review was also performed of the RAP's facilities in an attempt to address the various facilities needing improvements to meet current and future needs, prevent future maintenance problems, and offer positive alternatives to an increasingly dense and urbanized population.

City of Los Angeles 50 Parks Initiative

In 2012, the RAP launched the 50 Parks Initiative based on findings in the 2009 *Citywide Community Needs Assessment* indicating that park facilities are not equitably distributed across the City and that many communities do not have parks within a reasonable distance. The 50 Parks Initiative seeks to build 50 parks in densely-populated neighborhoods or communities currently lacking sufficient park space and recreational facilities (RAP 2017b).

Los Angeles Countywide Comprehensive Parks & Recreation Needs Assessment

The Parks & Recreation Needs Assessment, adopted in May 2016, documents existing parks and recreation facilities in the cities and unincorporated communities of Los Angeles County and uses the data to determine the scope, scale, and location of park needs in Los Angeles County. The Parks & Recreation Needs Assessment also provides a framework for considering parks as key infrastructure; uses a new series

of metrics to determine park needs; supports a need-based allocation of funding for parks and recreation; and emphasizes community priorities and deferred maintenance projects.

City of Los Angeles Parks Condition Assessment Report

The Parks Condition Assessment (PCA) Report is a summary of the existing site conditions and recommended improvements for all parks owned by the RAP (July 2018). It includes general information about each facility's site history, building(s) information, and recreational features. It provides information on previously completed, current, and recommended facility improvements. The PCA Report covers assessments of over 16,000 acres of parkland at 559 park sites in Los Angeles, including regional parks, recreation centers, pools and bathhouses, senior centers, lakes, trails, picnic areas, and playgrounds.

All facilities have been inspected and recommendations for improvements are listed for each park for outdoor areas and building improvements. Outdoor improvements include landscape and tree planting, replacements or upgrades to irrigation systems, accessibility improvements to provide compliant drinking fountains, parking and path of travel, and energy and water conservation improvements. Building improvements include kitchen and restroom upgrades, lighting improvements, heating, ventilation, and air condition system replacements or upgrades, and general building maintenance repairs, such as, roofing, flooring, and painting. Twenty of the 184 recreation centers are recommended to be replaced. The existing recreation centers are in poor condition needing major building retrofit and renovation and no longer meet the needs of the community. In order to provide recreational opportunities, new, modern, functional facilities are needed. Twelve of the 60 pool and bathhouse facilities are recommended to be replaced. Most of the existing facilities are over 60 years old, have surpassed their expected service life and are now requiring extensive maintenance in order to remain operational. Replacement of the twelve (12) facilities with modern pool and bathhouse facilities will prevent unexpected closures during the summer season and provide continuous recreational opportunities to the community. One new senior center facility is recommended to be constructed to replace the existing modular building currently used as the senior center.

According to the *Parks Condition Assessment Report*, current projects include the design and construction of five recreation centers, nine pool and bathhouse facilities, and five senior centers to the extent of the available funds. For future park projects, the estimated assessment to replace, renovate, and/or upgrade all the facilities covered in this report include: improvements to regional parks, such as, Angel's Gate Park, Elysian Park, Griffith Park, and Venice Beach; improvements to parks with lakes, such as, Hollenbeck Lake and MacArthur Park Lake; and recommendations to replace 20 recreation centers, replace 12 pool and bathhouse facilities, and construct one new senior center. Possible funding sources for these projects

include Proposition 68, Measure A, CDBG, Proposition K, Quimby and park facilities fees, public-private partnerships, and other grant opportunities. (City of Los Angeles 2018)

4.13.2 REGULATORY FRAMEWORK

There are several plans, regulations, and programs that include policies, requirements, and guidelines regarding parks and recreation services in the City of Los Angeles. As described below, these plans and guidelines include the following state and local regulations:

- State Quimby Act
- City of Los Angeles Charter
- City of Los Angeles General Plan, including:
  - Framework Element
  - Open Space Plan
  - Public Recreation Plan,
  - Health and Wellness Plan
  - Community Plan
- Los Angeles Municipal Code (LAMC)
- Los Angeles Department of Recreation and Parks 2009 Citywide Community Needs Assessment
- Los Angeles Department of Recreation and Parks—50 Parks Initiative
- Park Proud LA Strategic Plan 2018-2022

State

Quimby Act

California Government Code Section 66477, also known as the Quimby Act, was enacted by the California legislature in 1965. The Quimby Act authorizes cities and counties to enact ordinances requiring the dedication of land, or the payment of fees for park and/or recreational facilities in lieu thereof, or both, by developers of residential subdivisions as a condition to the approval of a tentative tract map or parcel map. As discussed below, the City implemented the Quimby Act in the City through the adoption of Los Angeles Municipal Code (LAMC) Sections 17.12, 12.33 and 19.17.

Local

The City of Los Angeles Charter

The City Charter established the RAP to construct, maintain, operate, and control all parks, recreational facilities, museums, observatories, municipal auditoriums, sports centers and all lands, waters, facilities or equipment set aside or dedicated for recreational purposes and public enjoyment within the City. The Board of Recreation and Parks Commissioners oversees the RAP.

With regard to control and management of recreation and park lands, Section 594(c) of the City Charter provides that all lands set apart or dedicated as a public park shall forever remain for the use of the public inviolate. However, the Board of Recreation and Parks Commissioners may authorize the use of those lands for any park purpose and for other specified purposes.

City of Los Angeles General Plan

Framework Element

The City's General Plan Framework Element (adopted in December 1996 and readopted in August 2001) (Framework) includes park policies while addressing the outdoor recreation needs of the City's residents, and is intended to guide the amendment of the General Plan's Open Space and Conservation Elements.

The Framework Chapter 9, Infrastructure and Public Services, contains policies and objectives that address the provision of parks within the City. These standards are addressed in the following policies:

Table 4.13-4 Relevant General Plan Policies

Relevant General Plan Policies	
Framework Element - Chapter 6, Open Space and Conservation	
Policy 6.4.1	Encourage and seek to provide for usable open space and recreational facilities that are distributed throughout the City.
Policy 6.4.2	Encourage increases in parks and other open space lands where deficiencies exist, such as South East and South Central Los Angeles and neighborhoods developed prior to the adoption of the State Quimby Act in 1965
Framework Element – Chapter 9, Infrastructure and Public Services	
Policy 9.23.2	Prioritize the implementation of recreation and park projects in areas of the City with the greatest existing deficiencies.
Policy 9.23.5	Re-evaluate the current park standards and develop modified standards which recognize urban parks, including multi-level facilities, smaller sites, more intense use of land, public/private partnerships and so on.
Policy 9.23.7	Establish guidelines for developing non-traditional public park spaces like community gardens, farmer's markets, and public plazas.
Policy 9.24.1	Phase the development of new programs and facilities to accommodate projected growth.
Source: City of Los Angeles, The Citywide General Plan Framework, An Element of the City of Los Angeles General Plan, re-adopted 2001.	

Service Systems Element - Public Recreation Plan

As a part of the General Plan's Service Systems Element, the Public Recreation Plan (PRP) establishes policies and standards related to parks, and recreational facilities in the City. The PRP was adopted in 1980 by the Los Angeles City Council and amended by City Council resolution in March 2016. The amendments modernize the PRP's recommendations and provide for more flexibility and equity in the distribution of funds used for the acquisition and development of recreational resources. The PRP also addresses the need for publicly accessible neighborhood, community, and regional recreational sites and facilities across the City. The PRP focuses on recreational site and facility planning in underserved neighborhoods with the fewest existing resources and the greatest number of potential users (i.e., where existing residential development generates the greatest demand), as well as areas where new subdivisions, intensification of existing residential development, or redevelopment of "blighted" residential areas creates new demand.

The amended PRP establishes general guidelines for neighborhood, community, and regional recreational sites and facilities that address general service radius and access as well as service levels relative to population within that radius. The PRP also states that the allocation of acreage for community and neighborhood parks should be based on the resident population within that general service radius. Toward this end, the amended PRP recommends the goals of 2.0 acres each of neighborhood and community recreational sites and facilities per 1,000 residents, and 6.0 acres of regional recreational sites and facilities per 1,000 residents. To determine existing service ratios, the RAP commonly uses the geographic area covered by the applicable Community Plan rather than the park service radius. The PRP does not establish requirements for individual development projects.

For a given neighborhood recreational site or facility, the amended PRP does not recommend a specific size, noting only that a school playground may partially serve this function (with up to one-half of its acreage counted toward the total acreage requirement [service level per capita]). The amended PRP does not define a specific service radius for neighborhood recreational sites and facilities, instead recommending that they should generally be within walking distance and not require users to cross a major arterial street or highway for access.

For community recreational sites and facilities, the amended PRP states that facilities may be of any size, but are generally larger than neighborhood parks, and a high school site may be counted toward half the acreage requirement/service level per capita. The amended PRP does not define a specific service radius for community recreational sites and facilities, instead recommending that they should generally be accessible within a relatively short bicycle, bus, or car trip, and easily accessible.

For regional recreational sites and facilities, the amended PRP states that facilities may be large urban recreational sites or smaller sites or facilities that draw visitors from across the City. The amended PRP does not define a specific service radius or further qualify access, stating only that the service radius should be that within a reasonable drive.

Health and Wellness Element

The *City's Plan for a Healthy Los Angeles* lays the foundation to create healthier communities for all Angelenos. As an Element of the General Plan, it provides high-level policy vision, along with measurable objectives and implementation programs, to elevate health as a priority for the City's future growth and development. Chapter 3 of the Plan, Bountiful Parks and Open Spaces, outlines policies and objectives to increase the availability of parks through park funding and allocation, park expansion, the Los Angeles River, park quality and recreation programs, park safety, local partnerships, water recreation, and active spaces. Specifically, the objectives include:

- Increase the number of neighborhood and community parks so that every Community Plan Area strives for 3 acres of neighborhood and community park space per 1000 residents (excluding regional parks and open spaces).
- Increase access to parks so that 75% of all residents are within a ¼-mile walk of a park or open space facility.
- Increase the number of schools (public, private, and charter) that have shared use agreements for community use outside of normal school hours by 25%.
- Increase the miles of the Los Angeles River that are revitalized for natural open space and physical activity, particularly in low-income areas.
- Increase the number of parks that feature or incorporate universally-accessible features.
- Improve the percentage of citywide population meeting physical fitness standards per week so that 50% percent of the population meets physical activity guidelines.

Community Plans

The Land Use Element of the City's General Plan is comprised of 35 Community Plans. Community Plans are intended to provide an official guide for future development and propose approximate locations and dimensions for land use. The Community Plans establish standards and criteria for the development of housing, commercial uses, and industrial uses, as well as circulation and service systems. The Community Plans implement the City's General Plan Framework at the local level and consist of both text and an accompanying generalized land use map. The Community Plans' texts express goals, objectives, policies, and programs to address growth in the community, including those that relate to open space required to

support such growth. The Community Plans' maps depict the desired arrangement of land uses as well as street classifications and the locations and characteristics of public service facilities. The City is currently undergoing an update of all 35 Community Plans.

Los Angeles Municipal Code (LAMC)

Quimby Act/Park Fees

In September 2016, the City adopted Ordinance No. 184,505, Parks Dedication and Fee Update Ordinance (Park Fee Ordinance). The aim of the Park Fee Ordinance is to increase the opportunities for park space creation and expand the fee program beyond those projects requiring a subdivision map to include a park linkage fee for all net new residential units. The Park Fee Ordinance amended LAMC Sections 12.21, 12.33, 17.03, 17.12 and 17.58, deleted LAMC Sections 17.07 and 19.01, and added LAMC Section 19.17. The Park Fee Ordinance increased Quimby in-lieu fees, provided a new impact fee for non-subdivision projects, eliminated the deferral of park fees for market rate projects that include residential units, increased the fee spending radii from the site from which the fee is collected, provided for early City consultation for subdivision projects or projects with over 50 units in order to identify means to dedicate land for park space, and updated the provisions for credits against park fees. The Park Fee Ordinance went into effect on January 11, 2017.

LAMC Section 12.33, *Park Fees and Land Dedication*, authorized under the Quimby Act, requires developers of most residential projects to dedicate land and/or pay in-lieu fees for parks and recreational facilities. Specific requirements are determined based on the type of project and number of units. Under LAMC Section 12.33 D, the area of land within a residential subdivision that is required to be dedicated for parks and recreational uses is determined by the formulas provide therein. Land dedication and in-lieu fee payment are subject to the restrictions set forth in Section 12.33 (i.e., land must be used for park or recreational uses and fees must be used for the acquisition or development of, and not the operation or maintenance of, park land).

Other Parks, Recreation and Open Space Requirements

LAMC Section 12.21 G requires that all residential developments containing six or more dwelling units on a lot provide, at a minimum, the following usable open space area per dwelling unit: 100 square feet for each unit having less than three habitable rooms, 125 square feet for each unit having three habitable rooms, and 175 square feet for each unit having more than three habitable rooms. LAMC Section 12.21 G also identifies what areas of a project would qualify as usable open space for the purposes of meeting the project's open space requirements.

As stated in LAMC Section 12.21 G, usable open space is defined as areas designated for active or passive recreation and may consist of private and common areas. Common open space areas must be readily accessible to all residents of the site and constitute at least 50 percent of the total required usable open space. Common open space areas can incorporate recreational amenities such as swimming pools, spas, picnic tables, benches, children's play areas, ball courts, barbecue areas, and sitting areas. A minimum of 25 percent of the outdoor common open space area must be planted with ground cover, shrubs, or trees. Indoor recreational amenities can account for up to 25 percent of the usable open space requirements. Private open space is defined in an area that is contiguous to and immediately accessible from an individual dwelling unit, may have a dimension no less than six feet in any direction and must contain a minimum of 50 square feet, of which no more than 50 square feet per dwelling unit can be counted towards the total required usable open space.

LAMC Section 12.33 G, *Affordable Housing Exemption*, allows new residential dwelling units that are rented or sold to persons or households of very low, low, or moderate income to receive an affordable housing exemption from the park fee and land dedication requirement. An affordable housing unit shall receive an exemption from the requirement for dedication of land for park and recreational purposes and/or payment of the park fee if the affordable housing unit is affordable to a household at or below 120 percent of the area median income. In projects with a mix of market-rate and affordable units, only the affordable housing units shall receive this exemption. In addition, LAMC Section 12.33 C.3(e), *Exemptions*, lists the types of development that are not required to pay a park fee, which includes Accessory Dwelling Units (ADU) and Junior ADUs. LAMC Section 12.33 H, *Credits*, allows private recreational areas developed within a project site for use by the particular project's residents to be credited as meeting up to 35 percent of the project's calculated land dedication and/or in-lieu fee requirement. Recreational areas that qualify under this provision of LAMC Section 12.33 H include, in part, indoor recreation areas, gyms, swimming pools, and spas (when the spas are an integral part of a pool complex). Furthermore, in accordance with LAMC Section 12.33 H.2, the recreational areas proposed as part of a project must meet the following standards in order to be credited against the requirement for land dedication: (1) each facility is available for use by all of the residents of a project; and (2) the area and the facilities satisfy the park and recreation needs of a project so as to reduce that project's need for public recreation and park facilities.

LAMC Section 21.10.3, *Dwelling Unit Construction Tax*, establishes the payment of a dwelling unit construction tax of $200 per new residential unit. The tax is to be paid to a "Park and Recreational Sites and Facilities Fund" for the acquisition and development of park and recreational sites and facilities. If park and recreation provisions (i.e., fees, improvements, or land dedication) have been made pursuant to LAMC Section 12.33, the fair market value of those provisions is credited against the payment of this tax.

Pursuant to LAMC Sections 17.12 and 17.58, a final subdivision map shall not be approved or recorded, unless a park fee has been paid or land within the subdivision has been dedicated to the City for park or recreational purposes. Park fee rates for residential subdivision and non-subdivision residential projects are identified in LAMC Section 19.17 and adjusted for inflation annually.

Department of Recreation and Parks 50 Parks Initiative

In response to the 2009 Citywide Community Needs Assessment, the Department of Recreation and Parks developed the *50 Parks Initiative* with the purpose of substantially increasing the number of parks and facilities available across the City, with a specific focus on densely populated neighborhoods and communities that lack sufficient open space and recreational services. The *50 Parks Initiative* takes advantage of underutilized properties, many left blighted by the housing crisis, and creates recreation spaces in park poor neighborhoods.

Park Proud LA Strategic Plan 2018-2022

The Park Proud LA Strategic Plan (Strategic Plan) is the most recent strategic plan for the RAP, effective from 2018 until 2022. The Strategic Plan highlights critical work that needs to be accomplished over the next several years to ensure that the City has an accessible, equitable, and first-class park system. The Strategic Plan reflects chief priorities of the RAP, confronts new and existing challenges, and lays the framework to pursue new opportunities. Within the Strategic Plan, there are over two dozen outcomes organized under the following seven high-level priority goals:

- Provide safe and accessible parks;
- Offer affordable and equitable recreation programming;
- Create and maintain world class parks and facilities;
- Actively engage communities;
- Ensure an environmentally sustainable park system;
- Build financial strength and innovative partnerships; and
- Maintain a diverse and dynamic workforce.

4.13.3 ENVIRONMENTAL IMPACTS

Thresholds of Significance

Based on Appendix G of the *CEQA Guidelines*, implementation of the House Element Update would have significant impact related to parks and recreational facilities if it would:

- **Threshold 4.13-1:** Increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated
- **Threshold 4.13-2:** Include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment
- **Threshold 4.13-3:** Result in substantial adverse physical impacts associated with the provision of new or physically altered parks, or the need for new or physically altered parks, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios or other performance objectives

As this is a plan that does not include the proposal to build recreational facilities, impacts from Thresholds 4.13-2 and 4.13-3 would result from the same circumstances, where build out of the RHNA would create the need for new parks and impacts would result from the construction of new park facilities.

Methodology

The recreation analysis focuses on determining whether reasonably foreseeable development under the Housing Element Update would increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated. Furthermore, the analysis discusses whether the Proposed Project would create the need for new parks, the construction of which could result in significant environmental impacts. This analysis focuses on the existing conditions of parks and recreational facilities, and the potential for these facilities to be degraded or deteriorated, at an increased rate due to implementation of the Housing Element Update. This analysis estimates the number of residents that would be generated by housing development accommodated by the Housing Element Update and assesses whether the Proposed Project would result in substantial physical deterioration of park/recreational facilities or the need for new facilities.

Regulatory Compliance Measures (RCM)

The City has established regulatory requirements related to the provisions of parks. Any future development under the Housing Element Update would be required to comply with the following RCMs:

- **RCM-PS-2 (Increased Demand for Parks or Recreational Facilities):**
  - (*Subdivision*) Pursuant to Section 17.12 or 17.58 of the Los Angeles Municipal Code, the applicant shall pay the applicable Quimby fees for the construction of dwelling units.
  - (*Apartments*) Pursuant to Section 21.10 of the Los Angeles Municipal Code, the applicant shall pay the Dwelling Unit Construction Tax for construction of apartment buildings to be used for parks and recreational facilities.
- **RCM-PS-3 (Increased Demand for Parks or Recreational Facilities – Zone Change):** Pursuant to Section 12.33 of the Los Angeles Municipal Code, the applicant shall pay the applicable park fees for the construction of dwelling units.

Project Impacts and Mitigation Measures

Threshold 4.13-1	Would the Housing Element Update increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?

Impact 4.13-1 Housing development accommodated under the Housing Element Update would primarily involve new housing units in urban infill areas of the City. This housing would accommodate existing housing needs and forecasted growth which would increase the use of existing park and recreational facilities in those areas, many of which are already heavily used. The demand for existing park and recreational facilities and the lack of space to build new parks would accelerate the deterioration of existing parks. Such impacts to existing recreational facilities would be ***significant and unavoidable***.

As discussed in Section 3, *Project Description*, the Housing Element Update is a plan to accommodate forecasted growth and existing housing need. The Housing Element Update therefore is not anticipated to cause or result in growth. This section will analyze the impacts from the forecasted growth being accommodated by the Housing Element Update. The forecasted increase in population will increase citywide demand for parks. According to the California Department of Finance (DOF), the City has an estimated population of 3,923,341 with an average household size of 2.72 persons (DOF 2021). The Housing Element Update is a plan for the construction and operation of 420,327 housing units by 2029. Based on the forecasted population estimates from SCAG the estimated City population in 2029 would be approximately 4,309,231. As shown in Table 4.13-1, in the *Setting* above, the current parkland-to-resident ratios do not meet the City's standards for non-regional and regional parkland. If no new parks and recreational facilities

were to be built, the increase of 298,547 persons would further reduce the existing parkland ratios to 0.88 acres of non-regional parkland and 2.87 acres of regional parkland per 1,000 residents in the City.

This forecasted increase in population would increase the use of existing and planned parks and recreational facilities, particularly in areas where large numbers of new housing units are anticipated under the Housing Element Update, refer to the Housing Opportunity Areas shown in Figure 3-5. Because the City is primarily urbanized and built out, space to build new parks to meet the increased demand is limited. In addition, the *Community-Wide Needs Assessment* determined that facilities throughout the City were overused and in need of updating (RAP 2009). As discussed in the *Setting*, the City is planning to build some additional parks; however, it is likely that use of existing parks would increase, potentially to the point of overuse and physical deterioration of facilities.

Developers of future residential projects would be required to pay park mitigation fees (for non-subdivision projects) or dedicate land or pay Quimby in-lieu fees (for subdivision projects). Park fee amounts are reviewed and updated annually by the City. Payment of impact fees and the anticipated enhancement or maintenance of facilities with funds provided by these fees would help offset the deterioration of existing recreation facilities by providing funds for facility improvements and replacement of deteriorating equipment. As discussed in the 2009 RAP Community-Wide Parks Assessment, legacy systems, such as park and/or recreation systems that have evolved with the market and population base over decades, face multiple challenges when addressing the need for additional development. Some of the challenges include lack of available undeveloped land, cost of land acquisition, and the ramifications of removing private land from the tax base (RAP 2009). In urban areas of the City, available land for development of new parks to meet the City's acreage to person ratios is extremely limited.

The Housing Element Update includes the following policies that support the provision of new recreational facilities:

> Policy 1.1.4. Plan for and provide sufficient services and amenities to support the existing and planned population.
>
> Policy 3.1.4. Site buildings and orient building features to maximize benefit of nearby amenities and minimize exposure to features that may result in negative health or environmental impacts.
>
> Policy 3.1.5. Develop and implement environmentally sustainable urban design standards and pedestrian centered improvements in development of a project and within the public and private realm such as shade trees, parkways and comfortable sidewalks.

Policy 3.1.7. Promote complete neighborhoods by planning for housing that includes open space, and other amenities.

The following types of housing units are anticipated under the Housing Element Update:

- **Multi-family residential:** Multi-family residential projects may range in size from small apartment buildings with 2-10 units to larger apartment buildings and high-rise structures with hundreds of units. Multi-family developments of any size would potentially increase the use of existing recreational facilities. Multi-family developments are generally located in urbanized areas where parks are highly used and potential for new parks is limited. These areas would likely be in the High and Highest Resources Tracts, as shown in Figure 3-5, and in areas where larger multifamily development is allowed today, such as Regional Centers and around transit. These areas of the City are already built out, so additional housing units would create a greater demand on existing recreational resources which would result in substantial physical deterioration of existing recreational resources. However, developers would be required to comply with State and local regulations that include open space requirements or require mitigation or in-lieu fees for parks. As listed in Table 4-2, the Hollywood Center EIR analyzes a proposed multi-family development with 1,005 housing units located in the Hollywood Community Plan area for recreational impacts. The EIR provided the following analysis and impact conclusion for this impact:

  The Project would provide up to 1,005 residential units with a residential population up to approximately 2,433 new residents. The Project would provide approximately 166,582 square feet or 3.82 acres of open space accessible by all Project residents and visitors. The Project with the East Site Hotel Option's 883 residential units are estimated to generate approximately 2,140 new residents. The Project with the East Site Hotel Option would provide approximately 150,371 square feet or 3.45 acres of open space accessible by all residents and visitors.

  While the Project would result in an increase in the use of area public parks and recreational facilities, it is expected that Project resident use would be distributed across a number of the available recreational sites and facilities depending on the different amenities offered at each location, such that the impacts on any single location are likely to be relatively minor. Moreover, through the payment of required in-lieu fees for parks and recreational facilities, the Project would be consistent with the LAMC Section 12.33 parkland requirements. Therefore, demand would not cause substantial degradation of existing facilities or require a new public park.

  The Project would also be subject to, and would comply with, LAMC regulations that require the dedication of parkland or payment of in-lieu fees that would supplement on-site recreational facilities in compliance with the LAMC. Further, in terms of whether the Project would result in physical impacts, it is

anticipated that most Project residents, as well as Project employees, would use on-site recreational amenities (e.g., pool decks, fitness areas, and residential decks) and open space (e.g., plazas, the paseo, terraces, patios, landscaped areas, etc.) more frequently than off-site public parks and recreational facilities due to convenience. In this way, the Project's provision of on-site recreational amenities and open space would reduce the use of area parks and recreational facilities by Project residents. Nonetheless, some Project residents would still be expected to patronize other private or public parks and recreational facilities, including nearby public park amenities, such as picnic areas, tennis courts, basketball courts, and sports fields.

Therefore, … Impacts would be less than significant. (Hollywood Center DEIR at IV.K.4-25 to 26.)

- **Single-family residential:** Single-family residential projects may range in size and scale from smaller or larger single-family homes, to small-lot subdivisions and multi-property single-family subdivisions. Single-family developments of any size would increase the use of existing recreational facilities. Small single-family projects, such as small subdivisions with few net new homes, would be more likely to occur in residential areas throughout the City and would not result in a substantial increase in residents in a neighborhood. In addition, some single-family units have their own yards which creates less of a need for public facilities. Therefore, small single-family projects on an individual basis would not substantially increase the physical deterioration of existing recreational resources. Large single-family projects, such as small lot subdivisions, could be built throughout the City, but would be more likely to occur as infill development in the High and Highest Resources Tracts shown in Figure 3-5, in Regional Centers, or in areas near transit, due to City and regional planning goals that aim to focus development in transit-rich areas. These types of single-family developments would be primarily located in urban areas where available land is limited, and therefore, would have the potential to result in substantial physical deterioration of existing recreational resources. Single-family subdivision projects would be more likely to occur in undeveloped areas of the City, which generally do not have the same space restrictions since there is more open space, and the units typically include yards for private recreational space. Therefore, the need for park space is less pressing.

  Regardless of the type of single-family development, developers would be required to comply with City regulations that include open space requirements or require mitigation or in-lieu fees for parks. As listed in Table 4-2, an example of this development type is the Hidden Creeks Project, which is a large single-family residential development consisting of 188 single-family residences, a park, and an equestrian boarding facility on a 259-acre development site. The project defined features along with City Quimby requirements were found to reduce potential impacts to a level of less than significant by incorporating open space and recreational facilities as a part of the project. No mitigation was required.

  The 1209 6th Street project in the Venice Community Plan involved the construction of two single family homes in a small lot development. The Initial Study concluded that any impact would be less than

significant because the project would be required to pay $4,188 in Quimby Fees for each unit prior to operations and the increase in population would be minimal. (1209 6th Street IS at 82-83.)

- **ADUs:** ADUs include attached ADUs created through a building addition or conversion of existing floor area and detached ADUs of various scales, which are allowed in any zone that allows for residential use by right. An ADU would result in one additional unit on a property, which would not substantially increase the physical deterioration of existing recreational resources in a neighborhood.
- **Mixed use development:** Mixed use development could range in size and scale from neighborhood commercial mixed use with smaller nonresidential uses, to high-rise mixed use with larger nonresidential uses. Mixed Use developments are generally located in urbanized areas where parks are highly used and potential for new parks is limited. These areas would likely be in the High and Highest Resources Tracts shown in Figure 3-5, but could occur anywhere they are allowed by current zoning. Given the high density of these areas and the limited availability of land for additional recreational resources, developments of any size would contribute to the increased use and deterioration of recreational facilities. However, developers would be required to comply with State and local regulations that include open space requirements or require mitigation or in-lieu fees for parks. For example, as listed in Table 4-2, the 668 S. Alameda Street Project is a mixed use development consisting of 475 live/work units and ground-floor commercial space in the Arts District. The environmental assessment provided the following impact analysis and conclusions:

  Based on the formula provided within LAMC Section 12.33.D, up to approximately 2.54 acres of the Project Site would be required to be dedicated to the City (or equivalent in-lieu fees paid) for parkland and recreational facilities.

  The Project would not include the dedication of any portion of the Project Site to the City for parks and recreational facilities. However, LAMC Section 12.33.H permits privately-held park and recreational facilities developed within a project site to be credited against the project's park dedication and/or in lieu fee requirement as long as these park and recreational facilities are available for use by all project residents. As indicated above, the Project would include 44,623 sf (1.02 acres) of open space and recreational amenities, of which 14,537 sf (0.33 acres) would be open space accessible to the public; 23,974 sf would be common open space for Project residents; and there would be a 4,612 sf recreation room and fitness center space for Project residents. Although the Project would not provide on-site park space to meet the park requirements LAMC Section 12.33, through the payment of required in-lieu fees for parks and recreational facilities, the Project would be consistent with the LAMC Section 12.33 parkland requirements.

  As previously discussed, LAMC Section 21.10.3 sets a dwelling unit construction tax of $200 for each new residential unit for City acquisition of new park space, with the set aside or dedication of parkland and recreational facilities and/or payment of in-lieu fees under LAMC Section 12.33.H credited against the

payment of this tax. As the Project applicant would pay the $200 tax, the Project would be consistent with LAMC Section 21.10.3 dwelling unit construction tax requirements. Further, per Section 12.33.G., the Project may be eligible to receive an affordable housing exemption from a portion of the park fee and land dedication requirement based on the final number of affordable units provided by the Project.

Based on the above, with the proposed on-site open space and recreational facilities in addition to the required payment of in lieu park fees, the Project would be consistent with LAMC open space and parkland requirements. Therefore, this impact would be less than significant. (668 Alameda DEIR at 4.11.5-13 to 14.)

- **Conversion and/or rehabilitation:** Existing nonresidential, residential, and mixed use structures could be converted or rehabilitated for new residential uses in areas throughout the City. The conversion or rehabilitation of existing properties would not typically involve new construction but may result in full-time residents in structures that were previously not occupied by residents. An increase in residents would be minimal under small conversion projects (approximately 2-10 units), which would not result in significant impacts to existing recreational resources. A large conversion or rehabilitation project may result in hundreds of new residents, which may result in potentially significant impacts to existing recreational resources. However, developers would be required to comply with State and local regulations that include open space requirements or require mitigation or in-lieu fees for parks. For example, the Crossroads Hollywood Project, as listed in Table 4-2, is a mixed use project that involves new construction and would rehabilitate Crossroads of the World and the former Hollywood Reporter Building. The project in total includes 950 residential units with hotel, commercial/retail, office, entertainment, and restaurant uses. The EIR for this project, similar to the 668 Alameda project, stated that potential impacts to existing recreational facilities would less than significant because of the provision of on-site public and private open space and payment of in-lieu fees pursuant to LAMC Section 17.12, which is the City's parkland dedication ordinance that ensures compliance with the Quimby Act.

None of the 54 environmental assessments for housing reviewed for this EIR identified significant unavoidable impacts to parks or the need for mitigation. (See Table 4-2).

Existing State and local regulations, including compliance with RCM-PS-2 and RCM-PS-3, would provide funding for the provision of new recreational facilities. However, as discussed in the *Setting*, existing and planned parks do not meet the City's ratios for regional and non-regional parklands, and the addition of up to 298,547 new residents at the Housing Element Update plan horizon would further reduce the ratios of regional and non-regional parkland to 2.87 and 0.88 acres per 1,000 residents, respectively. Therefore, although recreational needs are often met in different ways in highly urban settings (e.g., use of private gymnasiums and recreational facilities, use of public rights-of-way for walking and jogging), the forecasted

increase in population accommodated by the build out of the RHNA, combined with the constraints on new park development in dense urban areas of the City, would be expected to substantially increase demands upon existing recreational facilities, many of which are already highly utilized. Parks and recreation facilities in areas where development would be focused could be adversely affected by the forecasted increase in population, which may cause and accelerate deterioration of those existing parks. This conclusion is supported by the recently published draft EIRs for the Hollywood Community Plan Update (CPU) and the Downtown CPU, both of which identified significant unavoidable impacts from deterioration of parks caused by the demand. The Downtown Plan CPU EIR, similar to the Hollywood CPU EIR, found:

> *Downtown Plan development is anticipated to increase the population of the Downtown Plan Area from 76,000 to 252,000 by 2040. This increase in population would augment the use of existing and planned parks and recreational facilities in and near the Downtown Plan Area, particularly in areas that are designated for residential development under the Downtown Plan.*
>
> *[…]*
>
> *Existing regulations and Downtown Plan policies would provide funding for the provision of new recreational facilities and some Downtown Plan policies would also support the maintenance of existing facilities. However, as discussed in the Setting, existing and planned parks serving the Downtown Plan Area currently fail to meet the City's four acres per 1,000 residents goal for neighborhood and community parks; therefore, although recreational needs are often met in different ways in highly urban settings (e.g., use of private gymnasiums and recreational facilities, use of public rights-of-way for walking and jogging), the more than threefold increase in population accommodated by the Downtown Plan combined with the constraints on new park development in Downtown Los Angeles (discussed under Impacts 4.14-2 and 4.14- 3 below) would be expected to substantially increase demands upon existing recreational facilities. All of the parks listed in* ***Table 4.14-1*** *could be adversely affected by the increase in population for the Downtown Plan Area, which may cause and accelerate deterioration of those existing parks.*

Based on that analysis, and finding no feasible mitigation because of the lack of available space to develop new parks to serve the anticipated population growth, the Downtown CPU EIR concluded the impact was significant and unavoidable. This analysis is relevant to the Housing Element Update as it involves substantial increase in housing and limited supply of land for new parks.

Based on all of the above, impacts related to the deterioration of existing parks would be ***potentially significant.***

Mitigation Measures

The City has conducted studies like the *Citywide Community Needs Assessment* and the *Parks Condition Assessment Report* to address issues with recreational facilities and manage the status of current and future recreational facilities. However, due to the lack of available space to develop new parks to serve the anticipated population growth in dense urban areas of the City, feasible mitigation beyond the policies and initiatives included in current City policies/programs and the Housing Element Update to enhance recreational opportunities is not available. Therefore, this impact would be ***significant and unavoidable***.

Threshold 4.13-2	Would the Housing Element Update include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?
Threshold 4.13-3	Would the Housing Element Update result in substantial adverse physical impacts associated with the provision of new or physically altered parks, or the need for new or physically altered parks, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios or other performance objectives?

Impact 4.13-2/4.13-3 Build out of the RHNA under the Housing Element Update would accommodate forecasted population growth that would result in demand for recreational and park facilities that serve the City and would require the construction of new and expanded facilities to meet City park acreage standards. Potential impacts associated with housing developments in urbanized areas of the City would be ***less than significant*** due to the lack of available space for the construction of new parks. However, single-family developments on larger tracts of undeveloped land could result in the construction of new parks that may have an adverse effect on the environment. Therefore, potential impacts associated with single-family residential developments would be ***significant and unavoidable***.

As discussed under Impact 4.14-1, the forecasted population growth being accommodated by the Housing Element Update would be an estimated 298,547 residents by 2029, thereby increasing use and demand for parks and recreational facilities. If no new parks and recreational facilities were to be built, the increase of 298,547 persons would further reduce the existing parkland ratios to 0.88 acres of non-regional parkland and 2.87 acres of regional parkland per 1,000 residents in the City, which do not meet the City's standards. Based on the City's goals of four acres of neighborhood and community parks per 1,000 persons, and six acres of regional parks per 1,000 persons, the forecasted growth accommodated by the Housing Element

will result in a demand for up to 1,161 acres of non-regional parkland and 1,742 acres of regional parkland to meet City standards.

The Housing Element Update includes the following policies that support the provision of new recreational facilities:

> Policy 1.1.4. Plan for and provide sufficient services and amenities to support the existing and planned population.
>
> Policy 3.1.4. Site buildings and orient building features to maximize benefit of nearby amenities and minimize exposure to features that may result in negative health or environmental impacts.
>
> Policy 3.1.5. Develop and implement environmentally sustainable urban design standards and pedestrian centered improvements in development of a project and within the public and private realm such as shade trees, parkways and comfortable sidewalks.
>
> Policy 3.1.7. Promote complete neighborhoods by planning for housing that includes open space, and other amenities.

Several constraints would limit the number and size of new park facilities constructed in the City, including a scarcity of vacant or underused land; high cost of real estate in throughout the City; and competition with other identified community priorities, such as affordable housing. There is no adopted capital improvement plan to provide parks for the population growth being accommodated by Housing Element Update housing development. With that said, it is foreseeable that the City will build parks to meet future demand, including with collected Quimby fees.

The 50 Parks Initiative exemplifies the kind of park facilities the City is currently implementing and is likely to continue implementing in the dense urban areas of Los Angeles. Most of the parks are pocket parks less than an acre in size with playground structures and exercise machines. These parks typically include zero or minimal structures and green space, and because they are intended to serve the local community and be accessible by foot and bike, do not provide parking (Ferguson et al. 2014). The construction and operation of such small-scale facilities would be expected to have minimal environmental impacts. For example, it is anticipated that these parks would be located on vacant lots lacking biological or cultural resources; generate minimal vehicle traffic to the site, which would limit air quality, greenhouse gas, noise, and transportation impacts; and be able to accommodate a limited number of people due to their small size, which would reduce park noise levels. Furthermore, construction of new or expanded neighborhood or pocket park facilities to serve the City would occur in urbanized areas that lack natural resources. Construction of new parks would be required to comply with applicable federal, State, and local

regulations and policies discussed in this EIR, such as NPDES permit requirements, the City's Tree Ordinance and Noise Ordinance, and the California Building Code, including CALGreen requirements.

Construction and operational impacts to air, noise, transportation, as well as other impacts of new developments from housing development are discussed throughout this EIR. Impacts from the construction of new or expanded parks in the City would be similar to those identified in this EIR for construction of housing development. Similar to other types of development, the construction of new or expanded park facilities could potentially contribute to the significant historic resource and construction noise impacts identified in Sections 4.4, *Cultural Resources*, and 4.10, *Noise*, of this EIR. However, based on the urban location and the limited size of expected parks and land available, the construction of new park facilities would likely qualify for an infill exemption or result in less–than-significant impacts with standard regulatory compliance measures and project specific design features or project specific mitigation measures.

As provided in Section 3, *Project Description*, the housing types that are anticipated under the Housing Element Update include multi-family, single-family, ADUs, mixed-uses, and rehabilitations or conversions. The housing developments reviewed for this EIR in Table 4-2 are of all size and scales, from one unit (York Residence) up to over 1,000 units (Hollywood Center). While some built on-site amenities and open space, only one built outdoor public recreation space. The Hidden Creek project, located east of Porter Ranch on undeveloped land, proposed a 16-acre park and an 18-acre equestrian facility. Impacts from construction were found to be similar to the project's other construction impacts which based on the sensitive location required numerous mitigation measures related to aesthetics and biological resources. No mitigation measures were imposed for the park impacts.

Substantial construction of new parks and recreation facilities is not anticipated in the built-out urban areas where large multi-family, mixed use and conversion projects would occur. If it does occur, impacts from infill parks, such as pocket parks, would be expected to be less than significant. However, potential impacts associated with larger single-family developments may require or include the construction of public parks. Additionally, the City may construct or expand parks or park facilities in the future in areas that are in or near undeveloped areas or sensitive environments, such as in the Hidden Creek project. Possible impacts from such construction could be disturbances to biological resources, increased noise near sensitive receptors during construction, or grading that may impact unknown cultural resources. Without knowing particular sites, however, impacts would be speculative. Therefore, impacts associated with housing projects that could occur under the project would be ***potentially significant.***

Mitigation Measures

The City has conducted the Community Needs Assessment, the Countywide Comprehensive Parks and Recreation Needs Assessment, and has prepared the Parks Condition Assessment Report to address issues with recreational facilities and plans to use these assessments as a way to manage the status of current and future recreational facilities. However, although the Housing Element Update includes policies encouraging the development of park and recreation facilities, there are no planned parks or facilities that would be built in the Housing Element Update and because of the speculative nature of impacts, development of mitigation for the future construction of new parks or park facilities to serve the population accommodated by the Housing Element Update is not feasible at this time.

Significance After Mitigation

Significant and unavoidable.

Cumulative Impacts

The geographic area to analyze cumulatively considerable recreation impacts includes the entire City of Los Angeles and surrounding areas. The Los Angeles Countywide Comprehensive Park & Recreation Needs Assessment, published in May 2016 by the Los Angeles County Department of Parks and Recreation (LA County DPR), evaluated recreational needs in Los Angeles County, including the City of Los Angeles (LA County DPR 2016). The report identifies many areas of the City as having a "Very High" park need (average of 0.7 acres per 1,000 residents of parkland) or "High" park need (average of 1.6 acres per 1,000 residents).

Based on the citywide project area for the Housing Element Update, potential project and cumulative impacts are similar. Population increase in the City and surrounding areas will constrain existing recreational resources and demand parks and recreational space, leading to accelerated deterioration of recreational space/facilities. It is also noted that Citywide parks and recreational facilities are often used by tourists who come to the City to use these resources and return to areas in which they live. As discussed in the Impact Analysis, the addition of up to 420,327 new housing units under the Housing Element Update would accommodate the City's forecasted population increase of 298,547 persons and potentially reduce parkland service ratios to 2.87 acres per 1,000 persons. This increase would exacerbate the existing need for new or expanded recreational facilities over time. In the absence of new parks, the citywide and regional population (i.e. surrounding cities and unincorporated areas) increase would increase park demand and therefore would be expected to accelerate the deterioration of existing parks, which would be a potentially significant cumulative impact.

As discussed under Impact 4.13-1, the Housing Element Update would result in a potentially significant impact related to the deterioration of existing parks serving the urban areas since there is not adequate space to provide sufficient park acreage to meet the projected increase in demand for parks based on the City's adopted standards. This would constitute a cumulatively considerable contribution to the significant cumulative impact related to park deterioration, and the cumulative impact is ***significant and unavoidable***.

As discussed under Impact 4.13-2, the Housing Element Update would increase demand for recreational and park facilities. -Construction of new parks or park facilities to satisfy the demand from the population growth accommodated by the Housing Element Update were identified as potentially significant. Cumulative impacts from the construction of new parks and park facilities could occur if there is other construction occurring in or around the same area. But without more information such cumulative impacts would be speculative.

Based on the above information, the incremental effect of the Proposed Project with respect to the deterioration of recreational facilities would cumulatively considerable and cumulative impacts would be ***significant and unavoidable***.

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4.14 TRANSPORTATION

4.14.1 INTRODUCTION

This section analyzes the potential effects of the Housing Element Update (Update) with respect to transportation. Topics addressed in this chapter include the environmental setting, circulation and mobility systems, regulatory framework, thresholds of significance, methodology, and mitigation measures related to transportation impacts.

As discussed in the Initial Study (see Appendix A), the Safety Element Update would not result in any adverse impacts related to transportation and were, therefore, scoped out of this EIR[1]. The analysis of Vehicle Miles Traveled (VMT) was prepared pursuant to LADOT's Transportation Assessment Guidelines (July 2020) which establish the guidelines and methodology for assessing transportation impacts for projects based on the updated CEQA guidelines from the State of California that require transportation impacts be evaluated based on VMT rather than level of service (LOS) or any other measure of a project's effect on automobile delay.

4.14.2 ENVIRONMENTAL SETTING

Circulation System

Overview

The study area is defined by the boundaries of the City of Los Angeles (City), which encompasses 467 square miles. The City is highly urbanized and is served by a circulation system that facilitates travel by multiple modes, including walking, bicycling, public transit, and motor vehicles, and includes an extensive network of freeways, highways, local streets, and bicycle facilities. The City of Los Angeles General Plan Transportation Element, also called Mobility Plan 2035, discussed in greater depth in the Regulatory Setting section, contains definitions, goals and objectives, and regulatory requirements for a variety of roadway classifications that make up the City's roadway system.

[1] Los Angeles Department of City Planning and Rincon Consultants, Inc. "Los Angeles Citywide Housing Element 2021-2029 Update Initial Study",2021. p. 119.

Regional Access

The roadway network in the City includes seven freeways that traverse the 181 miles of the City and connect the City to its outer regions. They include Interstate 5, 10, 105, 110, 210, 405, and US Highway 101. The City also includes 11 state highways (SR) including SR 1, 2, 47, 60, 90, 103, 110, 118, 134, 170, and 187. Bicycles and pedestrians are not allowed on freeways but are allowed on some state highways that function as arterial roads. Portions of state highways, including Pacific Coast Highway (SR-1), Santa Monica Boulevard (SR-2), Slauson Avenue (SR-90), and Venice Boulevard (SR-187), are currently designated as part of the citywide bikeway network. Freeways and state highways also accommodate transit vehicles. Existing freeways, state highways, and arterial streets are presented in Figure 4.14-1a through Figure 4.14-1g.

Figure 4.14-1a Existing Freeways, State Highways, and Arterials (Page 1 of 7)

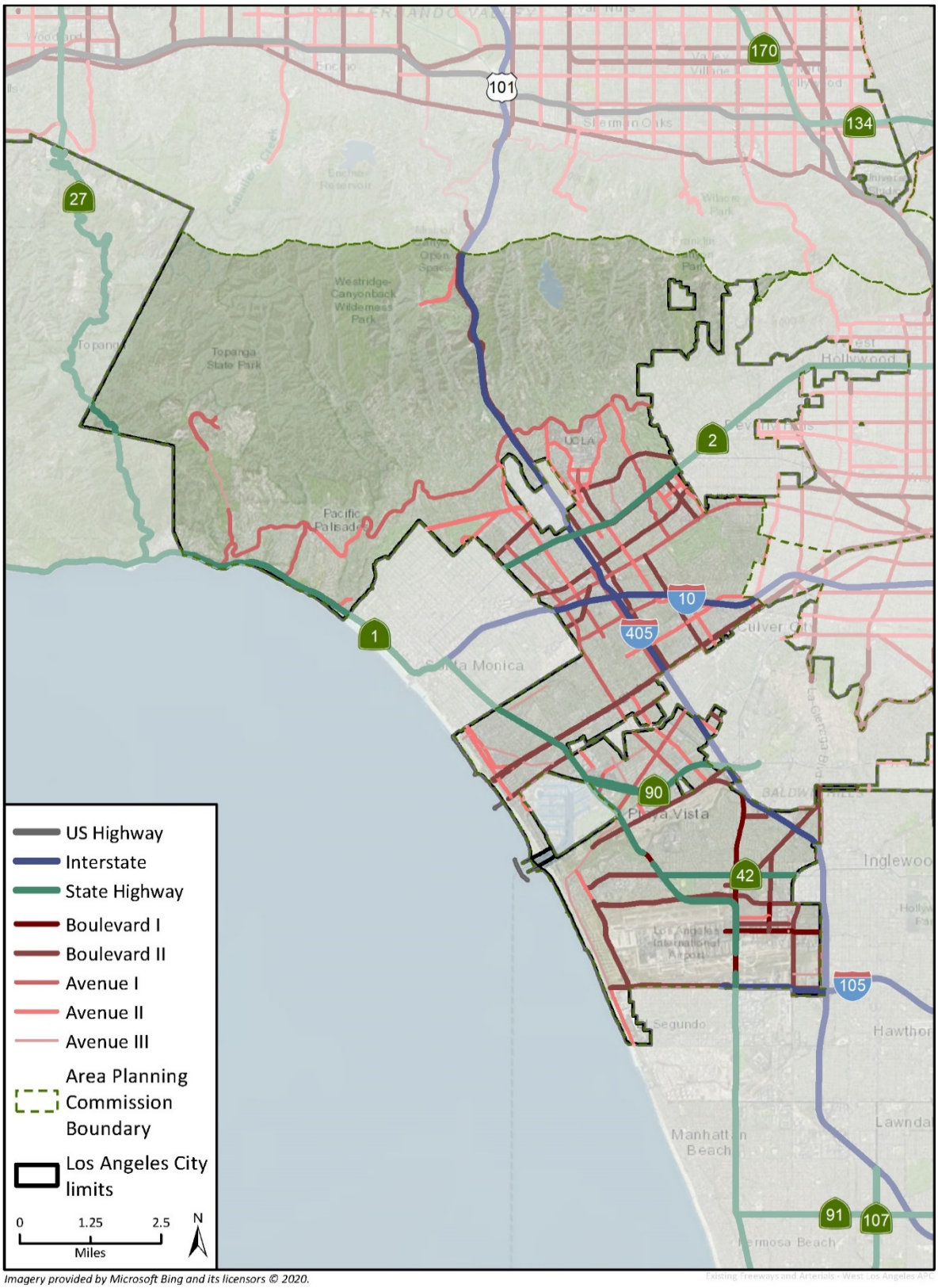


Figure 4.14.1b Existing Freeways, State Highways, and Arterials (Page 2 of 7)

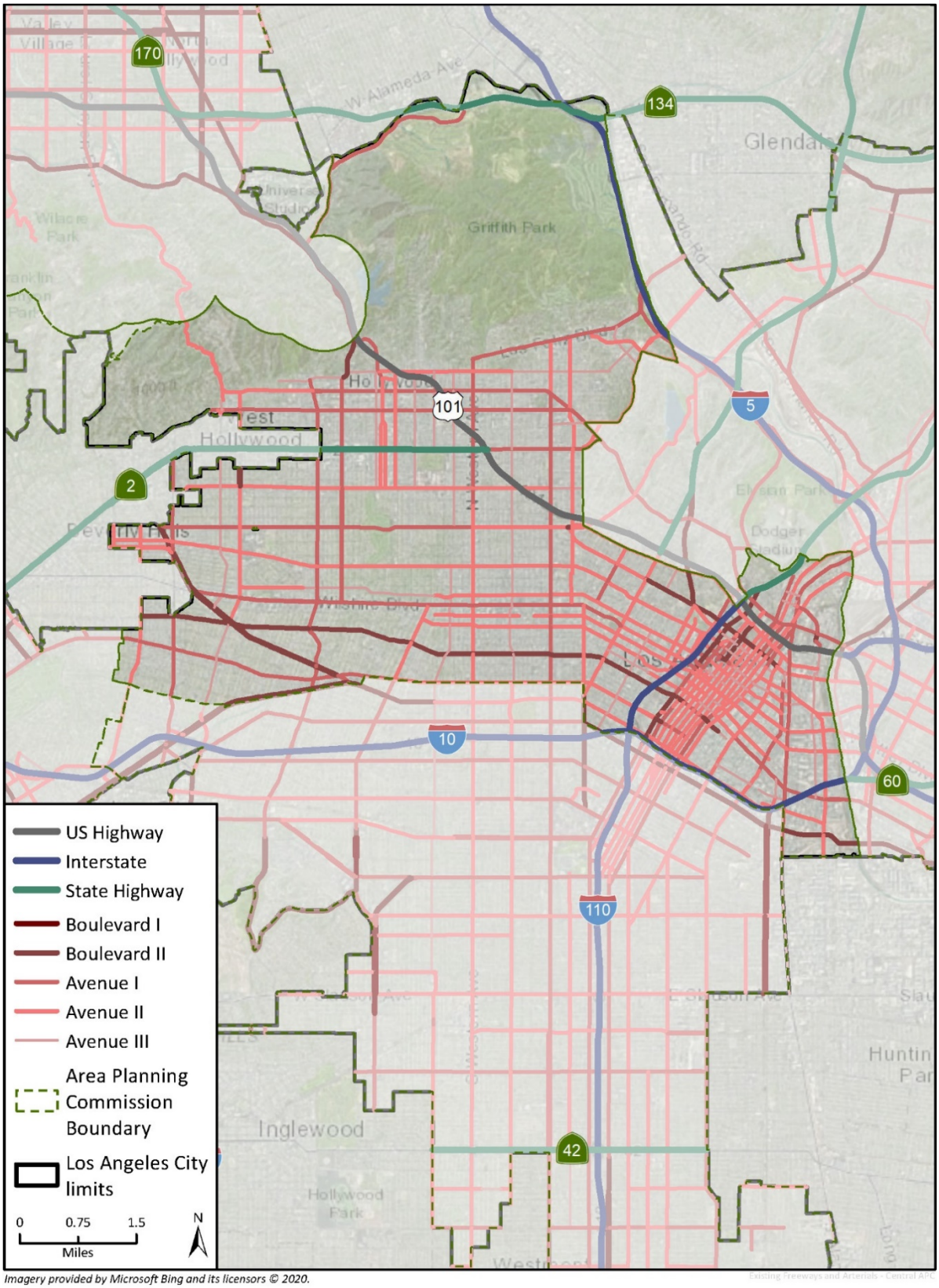


Figure 4.14.1c Existing Freeways, State Highways, and Arterials (Page 3 of 7)

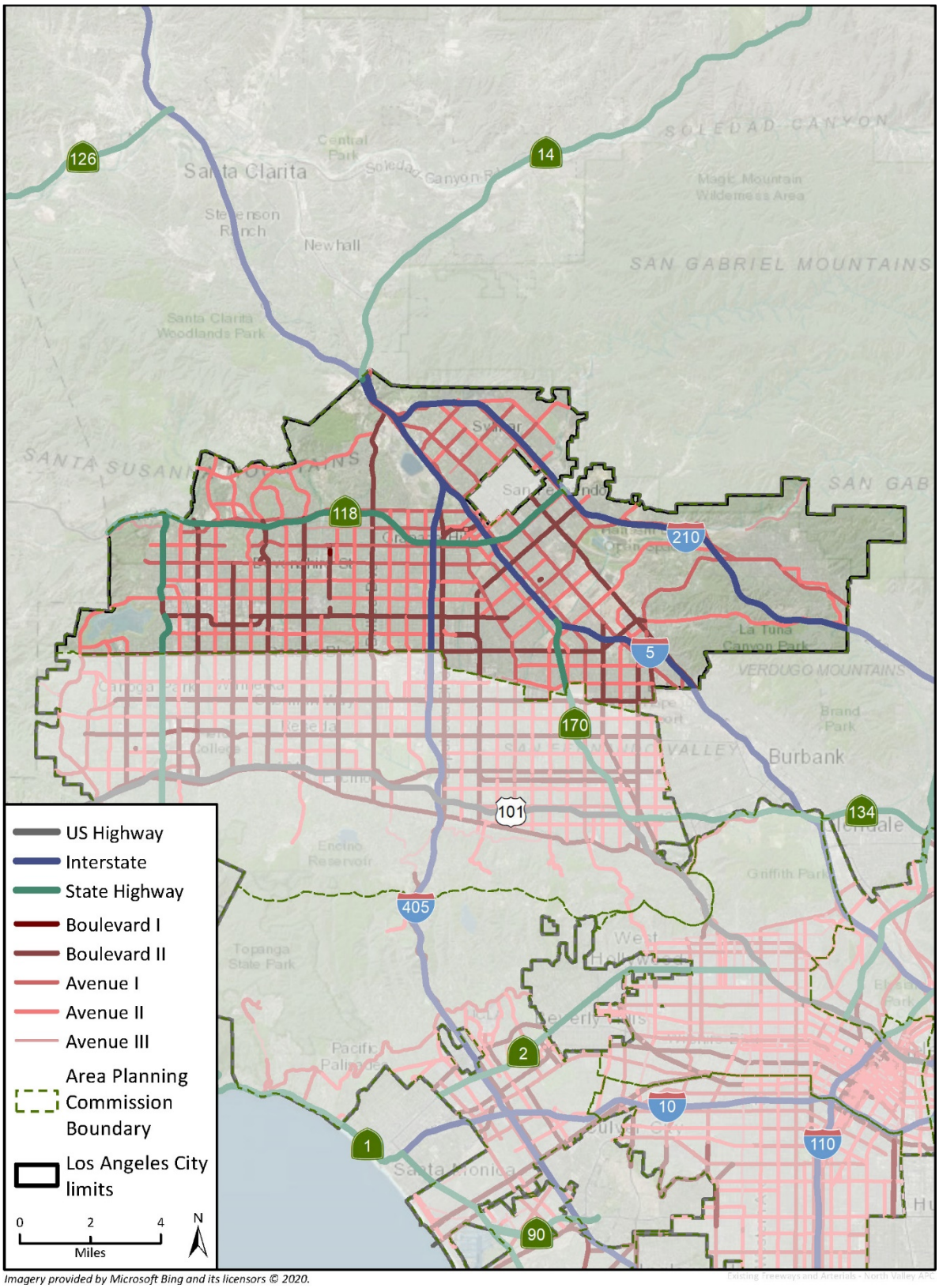


Figure 4.14.1d Existing Freeways, State Highways, and Arterials (Page 4 of 7)

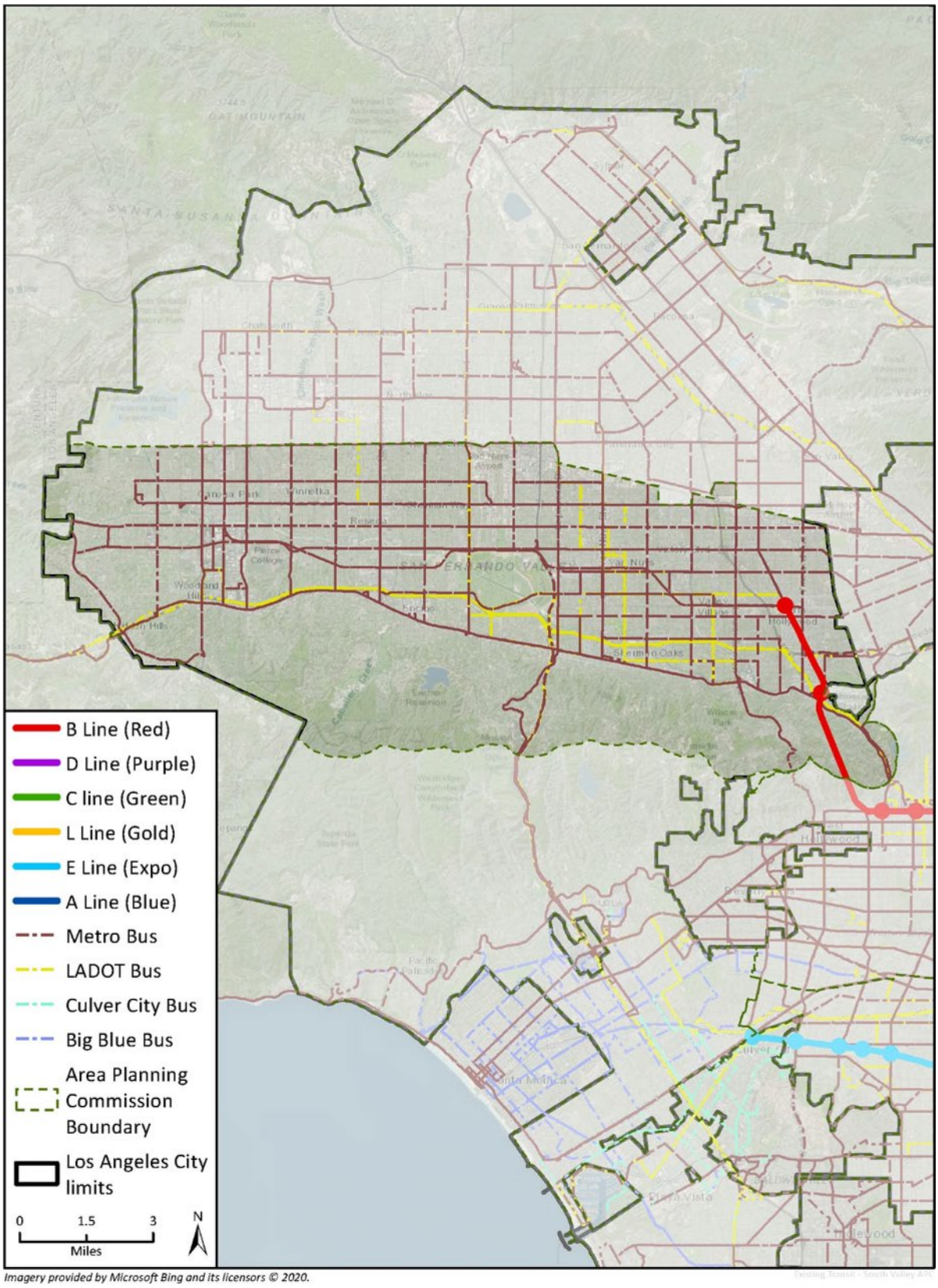


Figure 4.14.1e Existing Freeways, State Highways, and Arterials (Page 5 of 7)

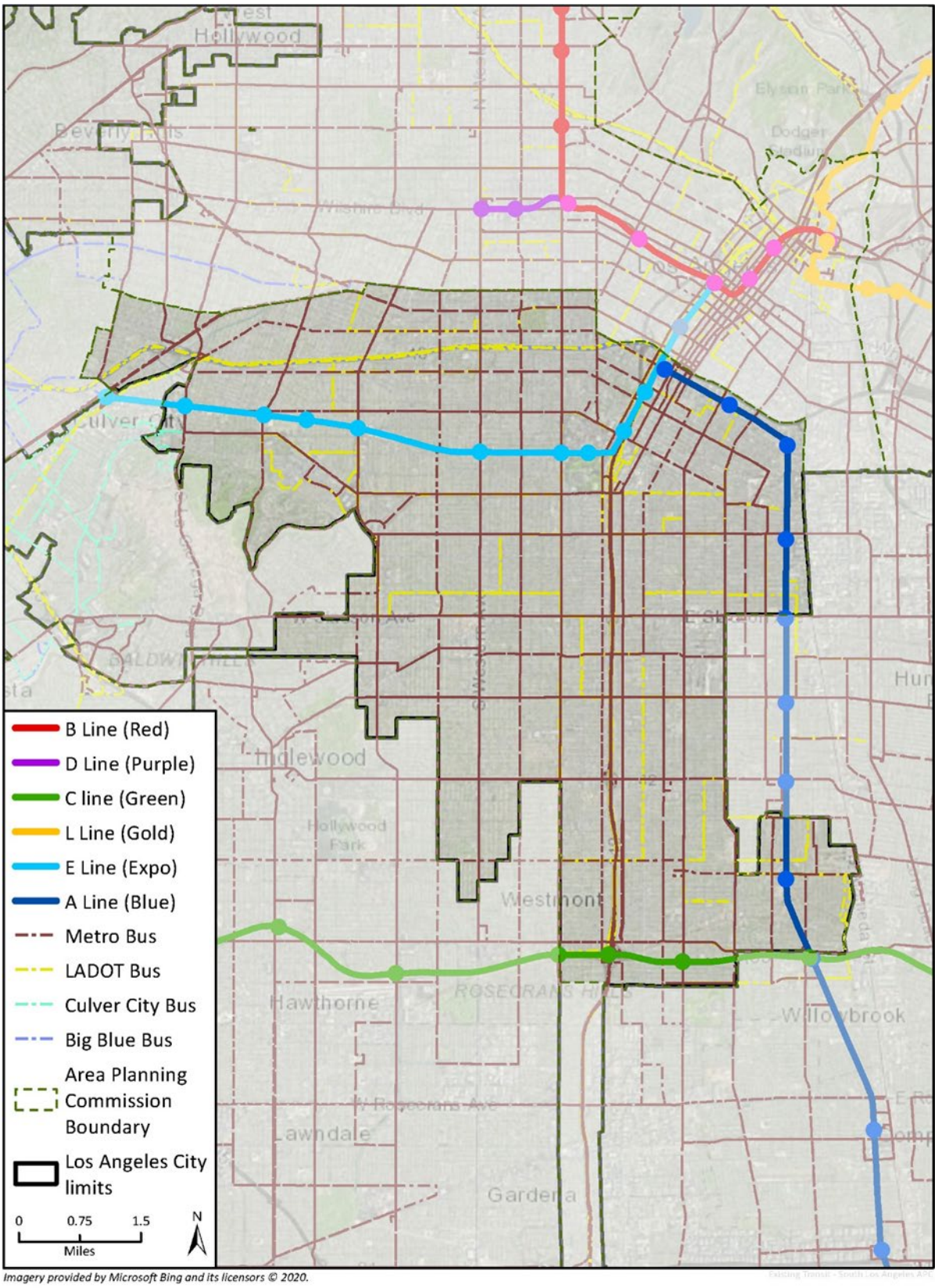


Figure 4.14.1f Existing Freeways, State Highways, and Arterials (Page 6 of 7)

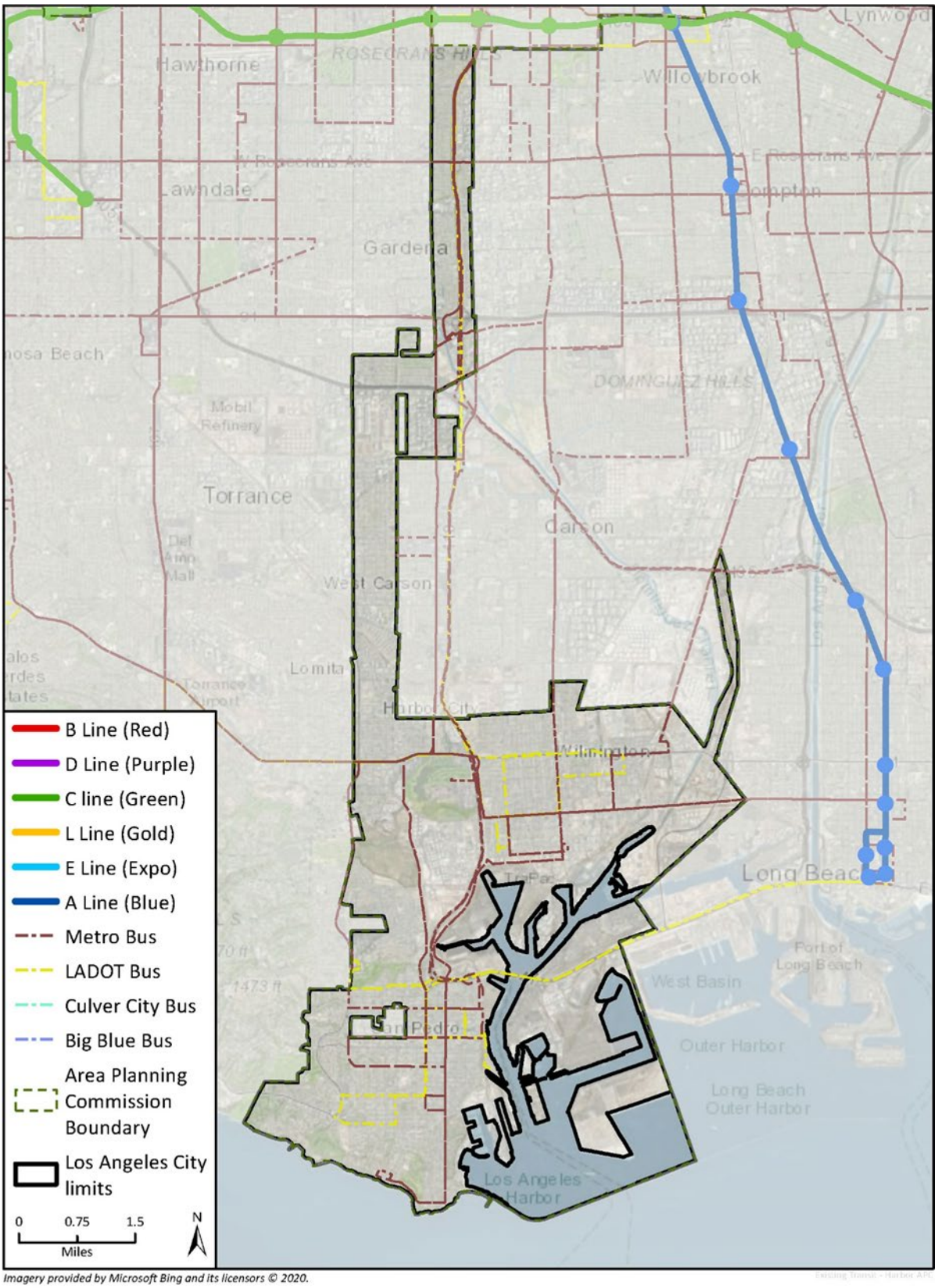
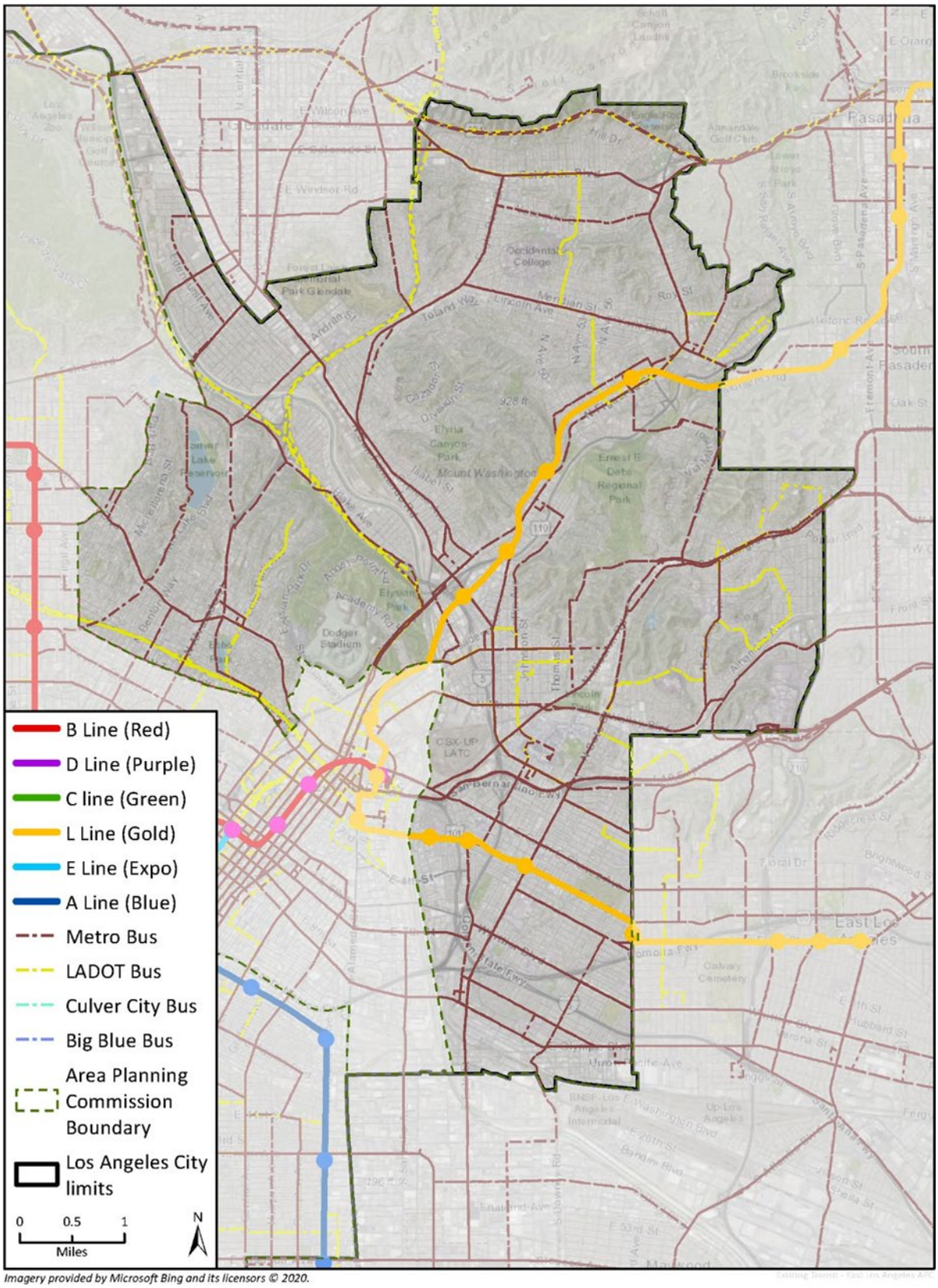


Figure 4.14.1g Existing Freeways, State Highways, and Arterials (Page 7 of 7)



Local Roadway Network

The City contains over 7,500 miles of public streets that accommodate motorized vehicles, including private motorized vehicles, taxis, freight vehicles, and transit vehicles. Pedestrian and bicyclist travel are also important components of the local roadway network. A majority of roadways in the City are aligned on a grid system. Mobility Plan 2035 re-designated streets from the 1999 Transportation Element to reflect new arterial types (five compared to three) to more accurately reflect the range of street dimensions that exist today and acknowledge that there are many arterial streets that are, and should remain, narrower than their current designation would permit. Below is a brief description of the types of facilities in the City based on the City's Mobility Plan 2035 and Complete Streets Design Guide. [2]

- **Boulevard I (Major Highway Class I).** Class I Boulevards are generally defined as having three to four lanes in each direction along with a median turn lane. The width of a Class I Boulevard is usually 100 feet, with a typical sidewalk width of 18 feet and a target operating speed of 35 miles per hour (mph).
- **Boulevard II (Major Highway Class II).** Class II Boulevards are generally defined as having two to three lanes in each direction along with a median turn lane. The width of a Class II Boulevard is usually 80 feet, with a typical sidewalk width of 15 feet and a target operating speed of 35 mph.
- **Avenue I (Secondary Highway).** Class I Avenues typically have one to two lanes in each direction, a roadway width of 70 feet, a sidewalk width of 15 feet and a target operating speed of 35 mph. An Avenue I typically includes streets with a high amount of retail uses and local destinations.
- **Avenue II (Secondary Highway).** Avenue II streets usually have one to two lanes in each direction, with a typical roadway width of 56 feet, a typical sidewalk width of 15 feet and a target operating speed of 30 mph. Such streets are typically located in parts of the City with dense active uses, and a lively pedestrian environment.
- **Avenue III (Secondary Highway).** Avenue III streets are defined to have one to two lanes in each direction, with a roadway width of 46 feet, a sidewalk width of 15 feet, and a target operating speed of 25 mph. This classification was developed to maintain roadway width in older, more historic parts of the City.
- **Collector Street.** Collector Streets generally have one travel lane in each direction, with a roadway width of 40 feet and a sidewalk width of 13 feet. The target operating speed for Collector Streets is 25 mph. Such streets are typically intended for vehicle trips that start or end in the immediate vicinity of the street.

[2] Complete Streets Design Guide. Adopted August 11, 2015. Available: https://losangeles2b.files.wordpress.com/2015/05/2015_csdg_web-4-22.pdf.

- **Industrial Collector Street.** Industrial Collector Streets vary from normal collector streets in that larger curb returns are incorporated to allow for the wider turning radii of trucks.
- **Local Street Standard.** Local Street Standard roadways typically have one lane in each direction, and are designed to have a 36-foot width, 12-foot sidewalks, and a target operating speed of 20 mph. Such streets are not designed for through traffic; rather, their focus is to allow access to and from destination points. Unrestricted parking is typically available on both sides of the street.
- **Local Street Limited.** Local Street Limited roadways typically have one lane in each direction, and are designed to have a 30-foot width, 10-foot sidewalks, and a target operating speed of 15 mph.
- **Industrial Local Street.** Although similar to the normal local streets, Industrial Local Streets differ primarily in width for the purpose of providing adequate space for trucks to maneuver. The typical roadway width for an Industrial Local Street is 44 feet, with 10-foot sidewalks and a target operating speed of 20 mph.
- **Pedestrian Walkway.** Pedestrian Walkways are designed for pedestrian use but are also appropriate for slow-moving bicyclists. Pedestrian Walkways have a width of 10 to 25 feet.
- **Shared Street.** Shared Streets provide a slow-speed environment where cars, bike, pedestrians, and scooters can comfortably utilize the street. Shared Streets have a minimum width of 20 feet with 5-foot buffer zones and a target operating speed of 5 mph.
- **Access Roadway.** Access Roadways are designed to have a width of 20 feet and are limited to private streets only that access no more than four dwelling units and are a maximum of 300 feet in length.
- **One-Way Service Road – Adjoining Arterial Street.** One-Way Service Roads typically have a width of 12 to 18 feet with a 3-foot curb separation from arterial streets.
- **Bi-Directional Service Road – Adjoining Arterial Streets.** Bi-Directional Service Roads typically have a width of 20 to 28 feet with a 3-foot curb separation from arterial streets.
- **Hillside Collector Street.** Hillside Collector Streets vary from normal collector streets in that sidewalks have a width of 5 feet and the target operating speed is 15mph. On-street parking is provided on both sides of the street.
- **Hillside Local Street.** Hillside Local Streets vary from normal local streets in that sidewalks have a width of 4 feet and the target operating speed is 15 mph. On-street parking is provided on both sides of the street.
- **Hillside Street Standard.** Hillside Street Standard roadways typically have one lane in each direction and are designed to have a 28-foot width, 4-foot sidewalks, and a target operating speed of 10 mph. On-street parking is provided on one side of the street.

- **Hillside Street Limited.** Hillside Street Limited roadways typically have one land in each direction and are designed to have a 20-foot width, 3-foot sidewalks, and a target operating speed of 10 mph. On-street parking is provided on one side of the street.
- **Modified Streets.** Many streets are identified under a specific roadway classification, but with a modification generally due to available width on smaller, historic streets. In these cases, typical number of lanes and traffic volumes are similar to the non-modified versions, but lane widths or available parking may be diminished.
- **Signalized Intersections and Traffic Control Devices.** The City of Los Angeles' Automated Traffic Surveillance and Control (ATSAC) system is a computer-based traffic signal control system that monitors traffic conditions and system performance to allow ATSAC operations to manage signal timing to improve traffic flow conditions. This system allows monitoring and control of the signal from a central Traffic Operations Center at City Hall. The importance of linking to the ATSAC system is the ability to coordinate the signals in relationship with other signals along a travel corridor. Signal coordination minimizes delay due to stops and enhances vehicle flow. Studies by LADOT and independent third parties have shown that the ATSAC system reduces congestion and increases average travel speeds[3]. The Adaptive Traffic Control System (ATCS) is an enhancement to ATSAC and provides fully traffic-adaptive signal control based on real-time traffic conditions. In addition, LADOT staff can manually adjust traffic signals remotely from the department's command center to respond to accidents, weather, special events, and other emergencies. All signalized intersections in the HE Update project area are currently operating under the City's ATSAC system and ATCS control.

Additionally, Mobility Plan 2035 identifies a layered network of corridors prioritizing bicycle, pedestrian, transit, and vehicle infrastructure improvements. These networks are defined as follows:

- The Transit-Enhanced Network (TEN) is the network of arterial streets prioritized to improve existing and future bus service for transit riders.
- The Neighborhood-Enhanced Network (NEN) is a selection of streets that provide comfortable and safe routes for localized travel of slower-moving modes such as walking, bicycling, or other slow speed motorized means of travel.
- The Bicycle-Enhanced Network (BEN) is a network of streets to receive treatments that prioritize bicyclists. Tier 1 Protected Bicycle Lanes are bicycle facilities that are separated from vehicular traffic. Tier 2 and Tier 3 Bicycle Lanes are facilities on roadways with striped separation. Tier 2 Bicycle Lanes are those more likely to be built by 2035.

[3] Los Angeles Signal Synchronization Fact Sheet. LADOT. February 14, 2016. Accessed July 27, 2017: http://ladot.lacity.org/sites/g/files/wph266/f/LADOT%20ATSAC%20%26%20Signals%20_%20Fact%20Sheet%202-14-2016.pdf

- The Vehicle-Enhanced Network (VEN) identifies streets that prioritize vehicular movement and offer safe, consistent travel speeds and reliable travel times.
- The Pedestrian-Enhanced Districts (PEDs) identify where pedestrian improvements on arterial streets could be prioritized to provide better walking connections to and from the major destinations within communities.
- The Goods Movement Network is built upon Metro's Countywide Strategic Truck Arterial Network and identifies roadways where goods movement improvements can alleviate congestions, improve mobility, remove traffic safety hazards, and promote economic health.

Existing arterial streets (Boulevards and Avenues) are illustrated in Figure 4.14-1 along with freeways and state highways.

Emergency Access

California state law requires that drivers yield the right-of-way to emergency vehicles and remain stopped until the emergency vehicles have passed. Generally, multi-lane arterial roadways allow the emergency vehicles to travel at higher speeds and permit other traffic to maneuver out of the path of the emergency vehicle.

The Los Angeles Fire Department, in collaboration with Los Angeles Department of Transportation (LADOT), has developed a Fire Preemption System (FPS), a system that automatically turns traffic lights to green for emergency vehicles travelling on designated streets in the City. The City of Los Angeles has over 205 miles of routes equipped with FPS.[4] Within the City of Los Angeles, fire prevention and suppression and emergency medical services are provided by the LAFD. Public protection service and law enforcement are provided by LAPD. New development projects in the City may increase the demand for fire protection and emergency medical services, and the LAFD evaluates new project impacts on a project-by-project basis. Consideration is given to project size and components, required fire-flow, response time and distance for engine and truck companies, fire hydrant sizing and placement standards, access, and potential to use or store hazardous materials.[5] The adequacy of emergency service may be influenced by factors such as staffing levels, emergency response times, and technology improvements, management strategies, and mutual aid agreements. Every year, LAFD assesses its resources and reallocates them based on demand and need citywide. The provision of new fire stations varies as a function of not only the geographic distribution of physical stations but also due to the availability of fire trucks, ambulances, and other equipment as well as access to reciprocal agreements with neighboring jurisdictions. The City

[4] Training Bulletin: Traffic Signal Preemption System for Emergency Vehicles, Los Angeles Fire Department, Bulletin No. 133, October, 2008.
[5] *Thresholds Guide, K.2.2*

requires that development plans be submitted to the City for review and approval to ensure that new development has adequate access, including driveway access and turning radius in compliance with existing City regulations.[6]

Public Transit

The primary origin/destination for transit in downtown Los Angeles and the city at large is Los Angeles Union Station. Located in the Central City North Community Plan, Union Station was built in 1939 to serve as a terminal for local railroads. Today, it serves as a major transportation hub for the region, with Metro, Metrolink, and Amtrak train service, as well as bus service from multiple operators.

Transit service is provided by multiple transit operators, including Metro Rail, Rapid buses, Express buses, Local buses, LADOT Commuter Express buses, Downtown Area Short Hop (DASH) buses, and other local operators, with networks connecting communities within and outside the City of Los Angeles. Figure 4.14-2a through Figure 4.14-2g illustrate existing transit routes for Metro Rail, Metro Bus, LADOT, Culver City Bus, and Big Blue Bus.

Below are brief descriptions of the transit operators that provide service within the City:

Metro

Metro is the primary transit operator in Los Angeles County, providing bus, light rail, and subway services as described below.

- Rail & Bus Rapid Transit: There are two Metro heavy rail lines (Red and Purple), four Metro light rail lines (Blue, Green, Gold, Expo) and two bus rapid transit (BRT) lines (Orange and Silver) operating in exclusive rights-of-way. Headways for Metro rail and bus rapid transit lines as typically as frequent as 15 minutes or less. Bicycles are allowed in designated areas on Metro trains at no extra charge.
- Rapid, Express & Local Bus Lines: Metro also operates approximately 180 bus routes in mixed traffic, with services varying considerably in speed, frequency and capacity. Headways for Metro Rapid buses are typically 10 minutes during peak hours, and 20 minutes during off-peak times. Metro Express buses operate during peak hours only. All buses are equipped with two bicycle racks at the front of the bus, and bicyclists may load their bicycles on the rack when there is space available at no extra charge. If the rack is full, bicyclists are asked to wait for the next bus.

[6] LAMC Section 12.21.A.5 "Design of Parking Facilities".

Figure 4.14-2a Existing Transit Routes (Page 1 of 7)

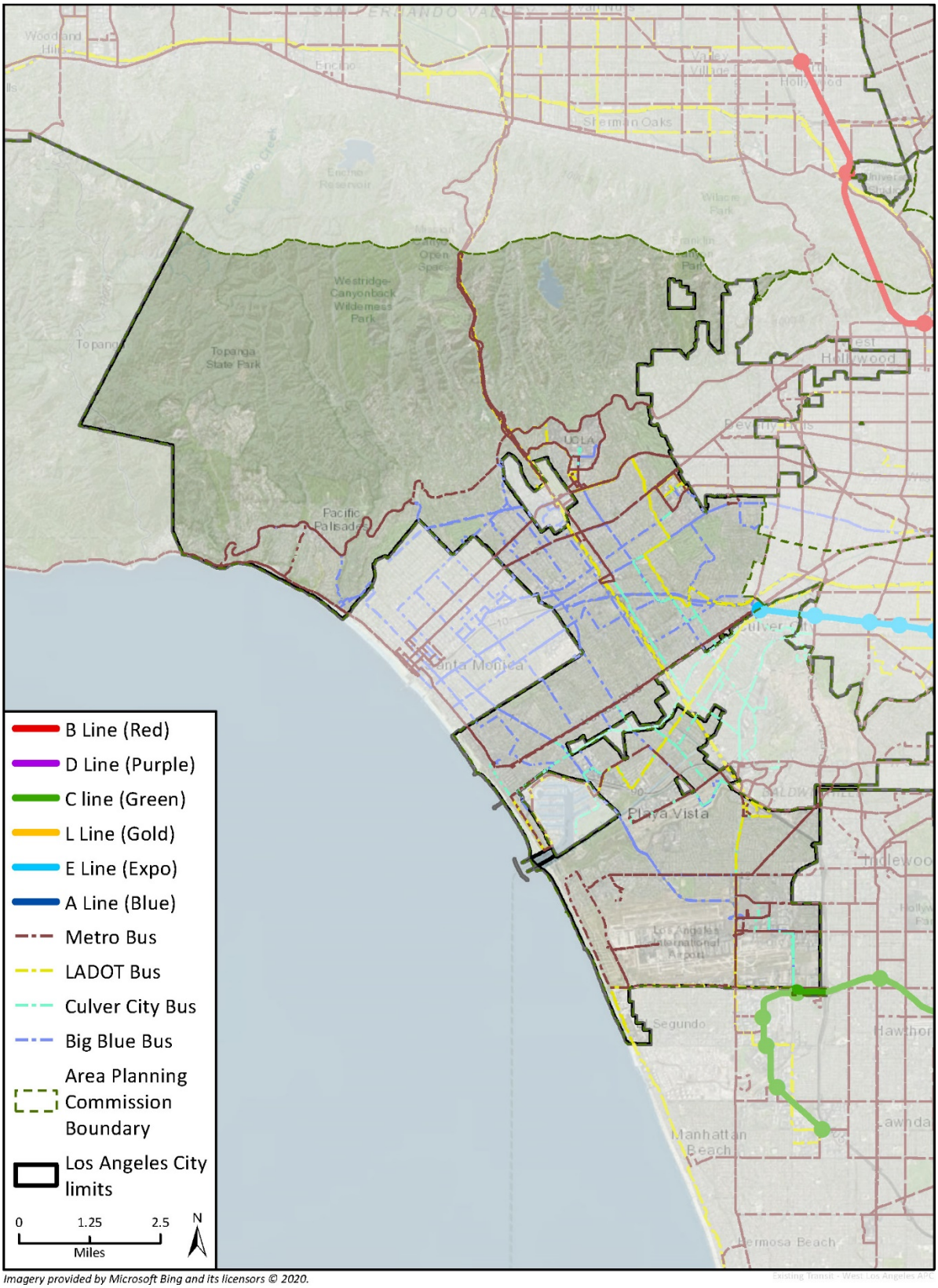


Figure 4.14-2b Existing Transit Routes (Page 2 of 7)

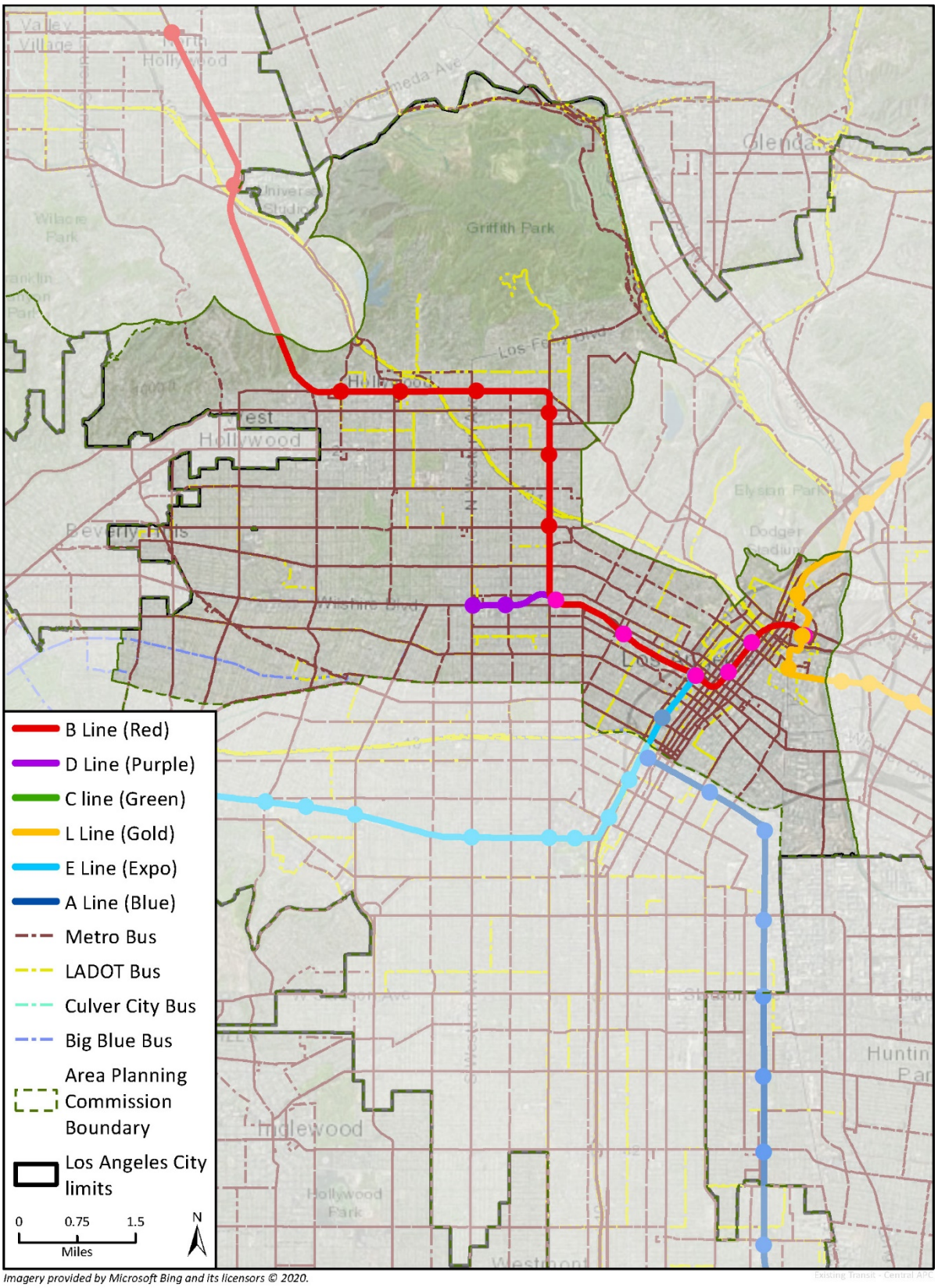


Figure 4.14-2c Existing Transit Routes (Page 3 of 7)

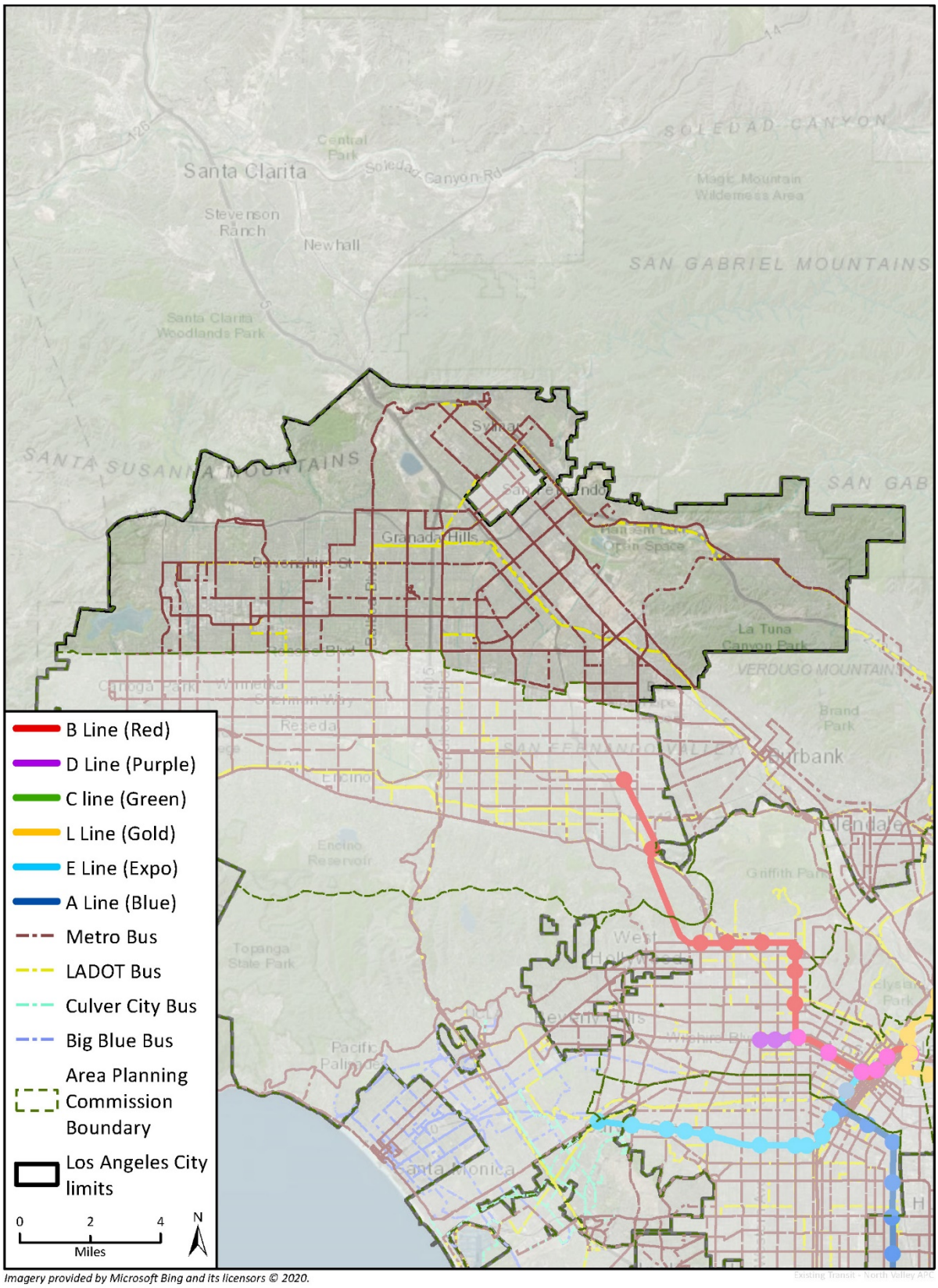


Figure 4.14-2d Existing Transit Routes (Page 4 of 7)

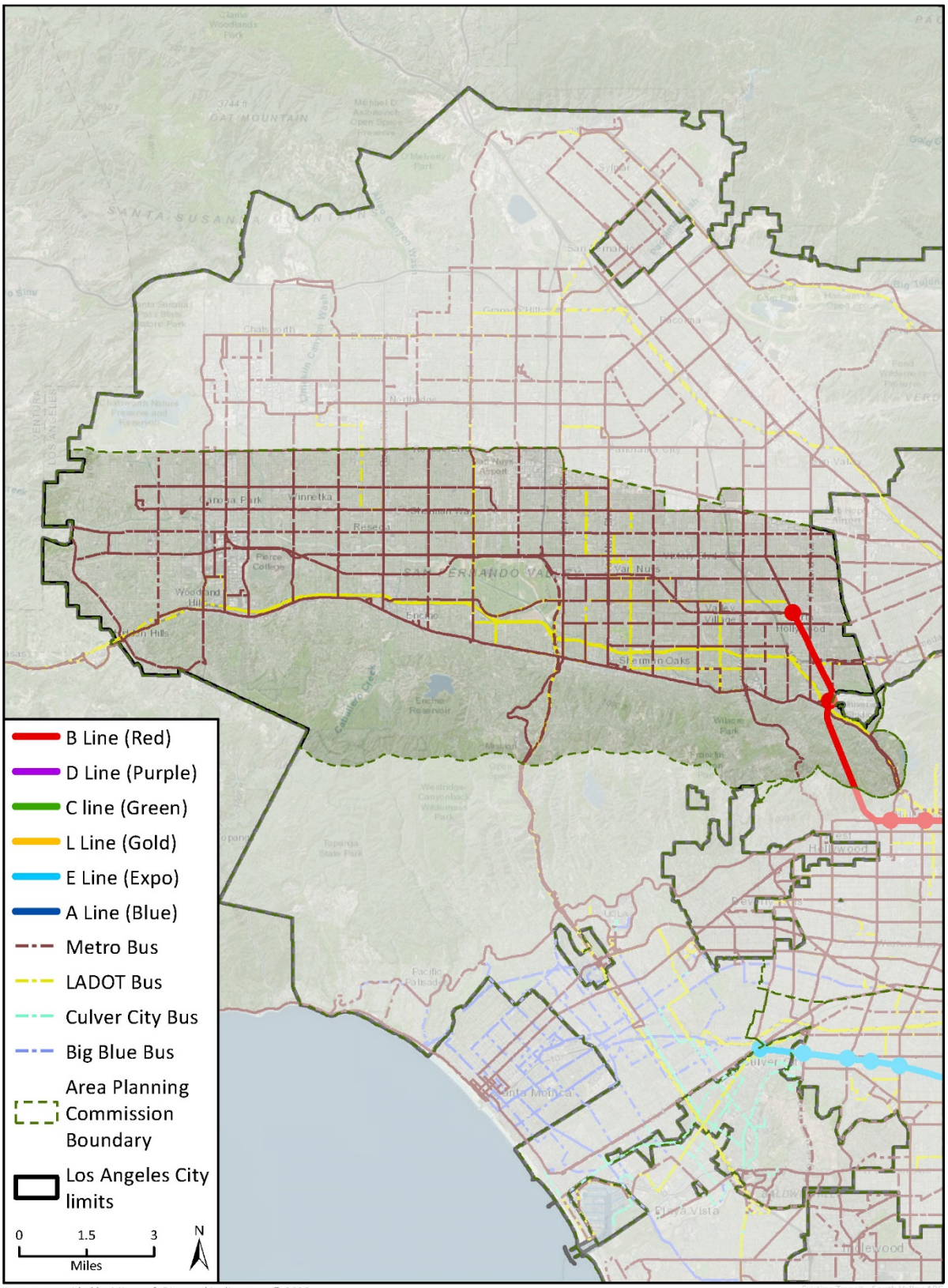


Figure 4.14-2e Existing Transit Routes (Page 5 of 7)

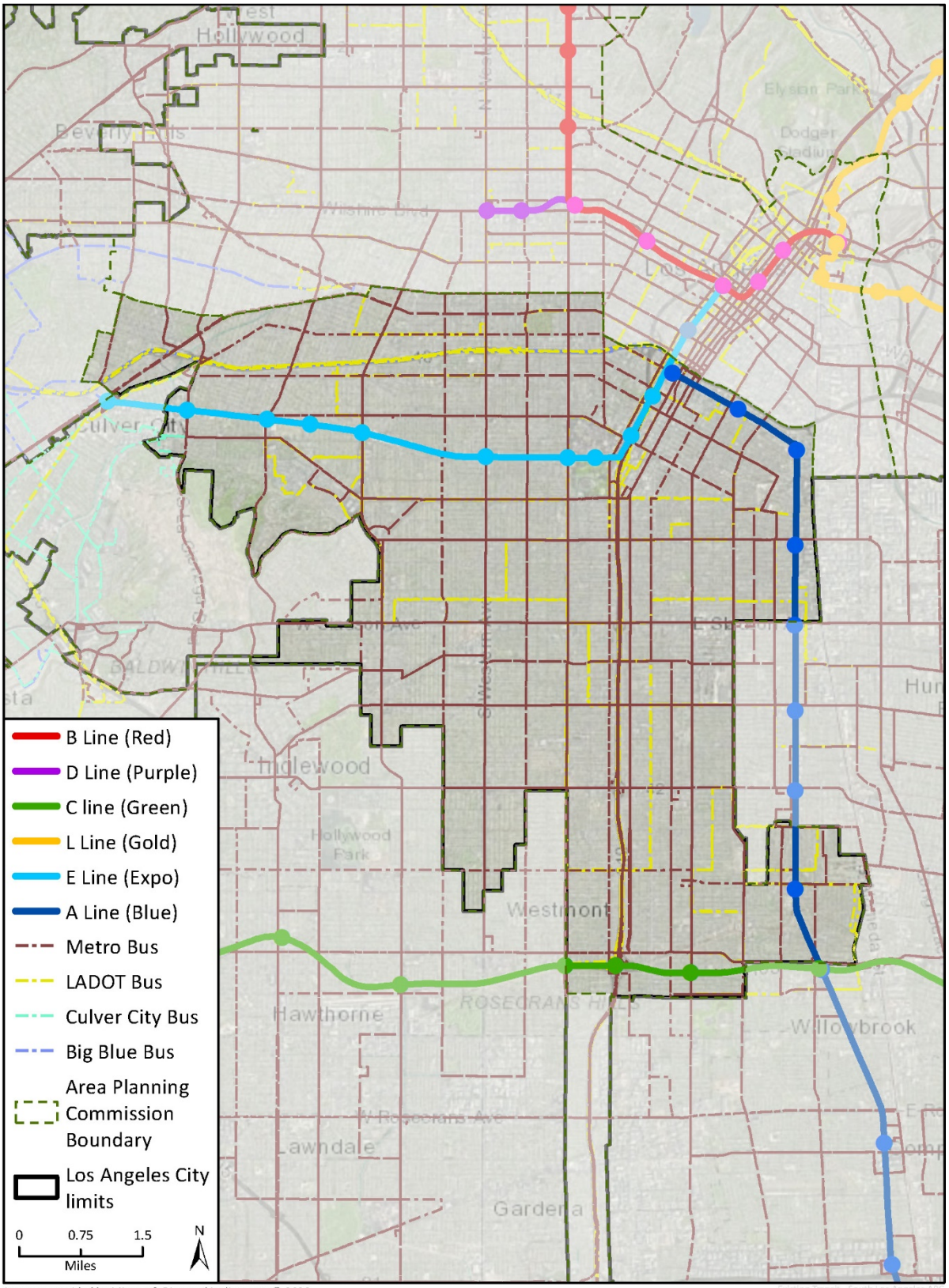


Figure 4.14-2f Existing Transit Routes (Page 6 of 7)

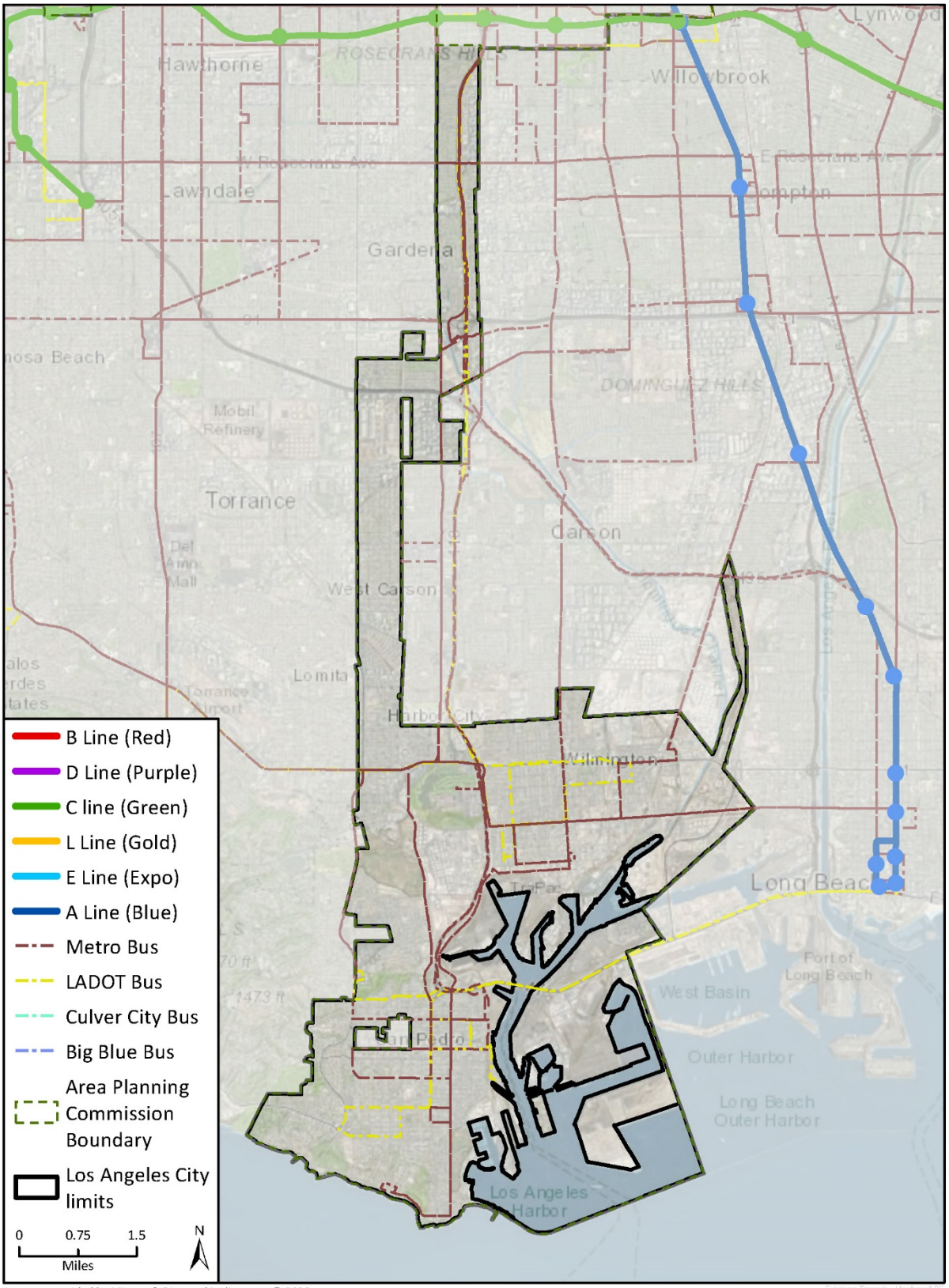
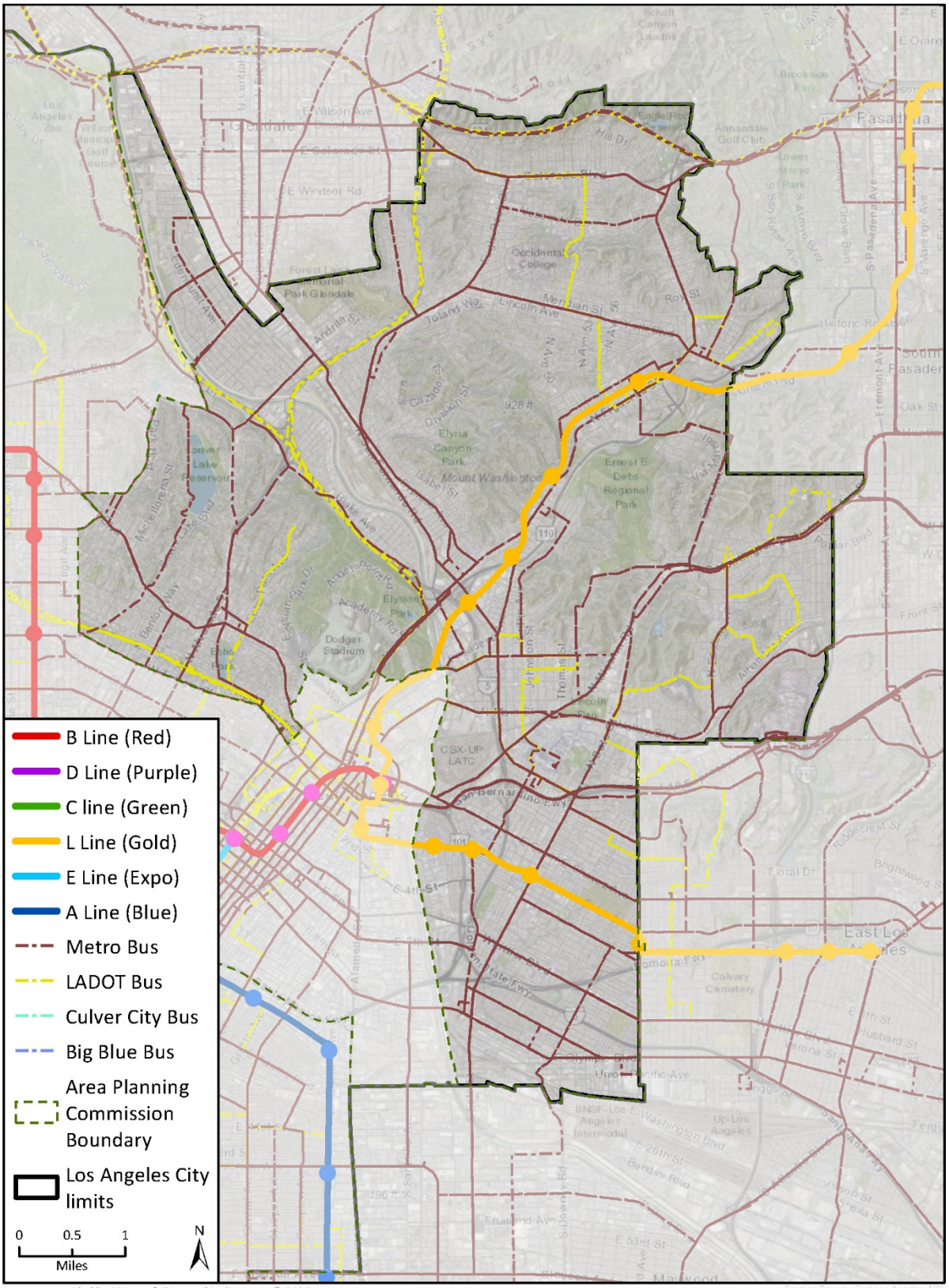


Figure 4.14-2g Existing Transit Routes (Page 7 of 7)



LADOT

LADOT provides local Downtown Area Short Hop (DASH) buses and Commuter Express bus services in the City of Los Angeles. DASH operates 32 community circulator routes covering Downtown Los Angeles and many outlying communities within the City. DASH buses provide local access in addition to first/last-mile connections to and from Metro Rail stations. Headways for DASH buses vary between 5-20 minutes depending on the selected route. The Commuter Express operates 14 routes, making a limited number of stops and transporting passengers between Downtown Los Angeles and other major centers within the City. Most Commuter Express routes operate during the peak hours only in the peak direction. All LADOT buses are equipped with three bicycle racks at the front of the bus, and bicyclists may load their bicycles on the rack when there is space available at no extra charge. If the rack is full, bicyclists are asked to wait for the next bus.

Metrolink

Metrolink operates on seven routes across a six-counties, including Los Angeles, Orange, Riverside, San Bernardino, Ventura, and a portion of northern San Diego County. Each Metrolink train accommodates three bicycles on the lower level at no extra charge. To accommodate more bicycles on select trains, "bike cars" (identified with yellow decals on the side of the train) have been added to hold up to nine bikes on the lower level. All Metrolink lines operate during the peak hours only in the peak direction. The following Metrolink services operate within and through the City:

- Antelope Valley Line
- Inland Empire – Orange County Line
- Orange County Line
- Riverside Line
- San Bernardino Line
- Ventura County Line
- 91/Perris Valley Line

Amtrak – Pacific Surfliner

Amtrak is a nationwide rail network, serving more than 500 destinations in 46 states, the District of Columbia and three Canadian provinces. The Pacific Surfliner, which operates within and through the Project Area, connects San Luis Obispo and San Diego through Los Angeles and Santa Barbara. This line offers 11 daily round-trip services between San Diego and Los Angeles, and five between Santa Barbara

and San Diego. Each Amtrak train can accommodate six bicycles per train and must be stored in designated racks. Passengers are recommended to make reservations for bicycle racks at no extra cost.

LAX FlyAway – Union Station

The LAX FlyAway buses offer daily, regularly scheduled roundtrips between each terminal at LAX and six locations (Hollywood, Long Beach, Orange Line, Union Station, Van Nuys, and Westwood). FlyAway buses provide services every 30 – 60 minutes. Bicycle racks are not provided on these buses. In downtown Los Angeles, Flyaway buses depart from Union Station at the Patsaouras Transit Plaza on the east side of the facility.

Other Transit Operators

There are several other transit operators with routes throughout the City: Antelope Valley Transit Authority, Culver City Bus, Foothill Transit, Gardena GTrans, Greyhound Buses, Montebello Bus Lines, Orange County Transit Authority Express, Santa Clarita Transit Commuter Express, Santa Monica Big Blue Bus, and Torrance Transit.

Bicycle Network and Pedestrian Facilities

The City's existing bicycle network consists of approximately 650 lane miles of on- and off-street facilities including approximately 65 miles of Class I bikeways (bicycle paths), 15 miles of Class IV separated bikeways (bicycle tracks), 450 miles of Class II bikeways (bicycle lanes), more than 125 miles of Class III bikeways (bicycle routes and bicycle friendly streets). Bicycle facilities are defined as off-street bicycle paths (Class I), on-street signed and striped bicycle lanes (Class II), on-street signed bicycle routes (Class III), and protected bicycle lanes or cycle tracks (Class IV). Existing bicycle facilities are presented in Figure 4.14-3a through Figure 4.14-3g.

The design features of the various types of bicycle facilities are summarized below.

- **Bicycle Path:** A paved pathway separated from motorized vehicular traffic by an open space or barrier and either within the highway rights-of-way or within an independent alignment. Bicycle paths may be used by bicyclists, skaters, wheelchairs users, joggers, and other non-motorized users. Caltrans refers to this facility as Class I Bikeway, which "provides a completely separated right-of-way for the exclusive use of bicycles and pedestrians with cross flow of motorists minimized."
- **Buffered Bike Lanes:** Buffered bicycle lanes provide on-street right-of-way in the form of a painted buffer that directs motorists to travel away from the bike lane and provides room for bicyclists to pass

another bicyclist without entering the adjacent motor vehicle travel lane. A buffered bicycle lane is considered a Class II bikeway.

- **Bicycle Lane:** A striped lane for 1-way bicycle travel on a street or highway. Caltrans refers to this facility as a Class II bikeway.
- **Bicycle Route:** is a shared roadway specifically identified for use by bicyclists, providing a superior route based on traffic volumes and speeds, street width, directness, and/or cross-street priority, denoted by signs only. Caltrans refers to this facility as a Class III Bikeway.
- **Protected Bicycle Lane (Cycle Track):** A bicycle lane that provides further protection from other travel lanes with a physical roadway intervention. This is considered a Class IV Bikeway.

Pursuant to the California Vehicle Code, bicycles are allowed on any street within the local street system. Pursuant to Los Angeles City Code, bicycles are also allowed on the sidewalk (LAMC 56.15). Bicyclists can bring their bikes on board transit in designated areas on Metro trains and on most Metro and LADOT buses on bicycle racks at the front of the bus at no extra cost. Metrolink and Amtrak also allow bicycles on board.

There are approximately 40,000 intersections in the City, of which 4,300 are signalized and approximately 22,000 contain marked crosswalks. Conditions vary widely in terms of sidewalk condition, pavement marking visibility, and obstructions in the sidewalk realm. An estimated 42% of the City's 10,750 miles of sidewalks are in disrepair.[7] In April 2015, the City of Los Angeles agreed to spend $1.3 billion over the next 30 years to fix sidewalks throughout the City, and produce two reports per year to document its progress in repairing substandard sidewalks.

- Pedestrian travel in the City varies based on the circulation network in any given area. Areas that have pedestrian-oriented uses fronting the sidewalk offer a pedestrian-friendly atmosphere whereas other areas characterized by long blocks fronting surface parking lots and industrial land uses offer little pedestrian amenities. In general, sidewalks range from 10 to 12 feet wide. The City of Los Angeles General Plan designates commercial and neighborhood activity centers that are characterized by ground floor retail and service uses oriented to pedestrians along the sidewalk as Pedestrian Priority Street segments. Pedestrian Priority Street segments are recommended to have wider sidewalks of 15 to 17 feet in width and other pedestrian friendly features such as curb side parking, wide crosswalks with a minimum width of 15 feet, and traffic signal modifications.

7 "A citizens sidewalk brigade for L.A." Los Angeles Times, September 11, 2012.

Figure 4.14-3a Existing Bicycle Facilities (Page 1 of 7)

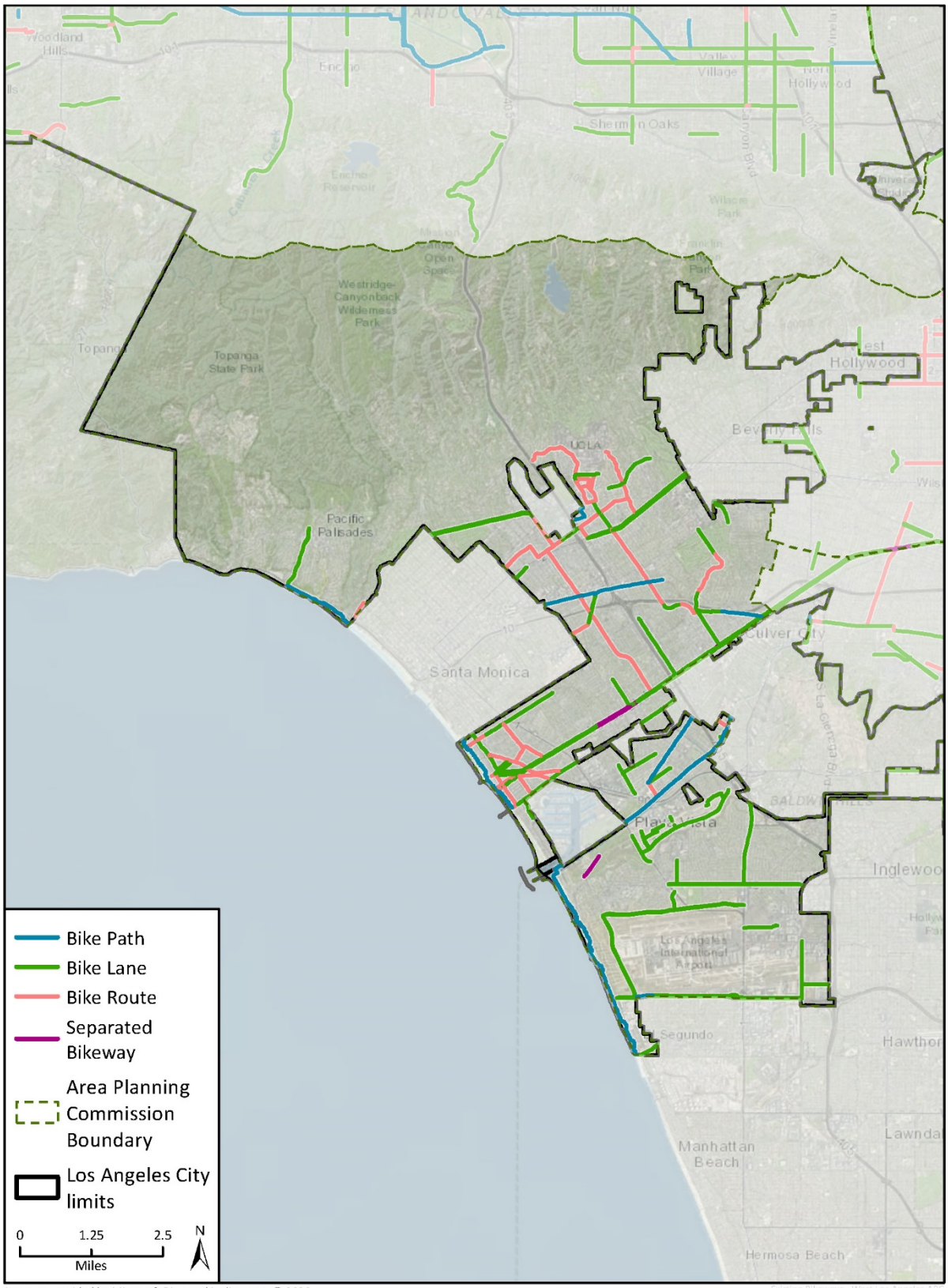


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Figure 4.14-3b Existing Bicycle Facilities (Page 2 of 7)

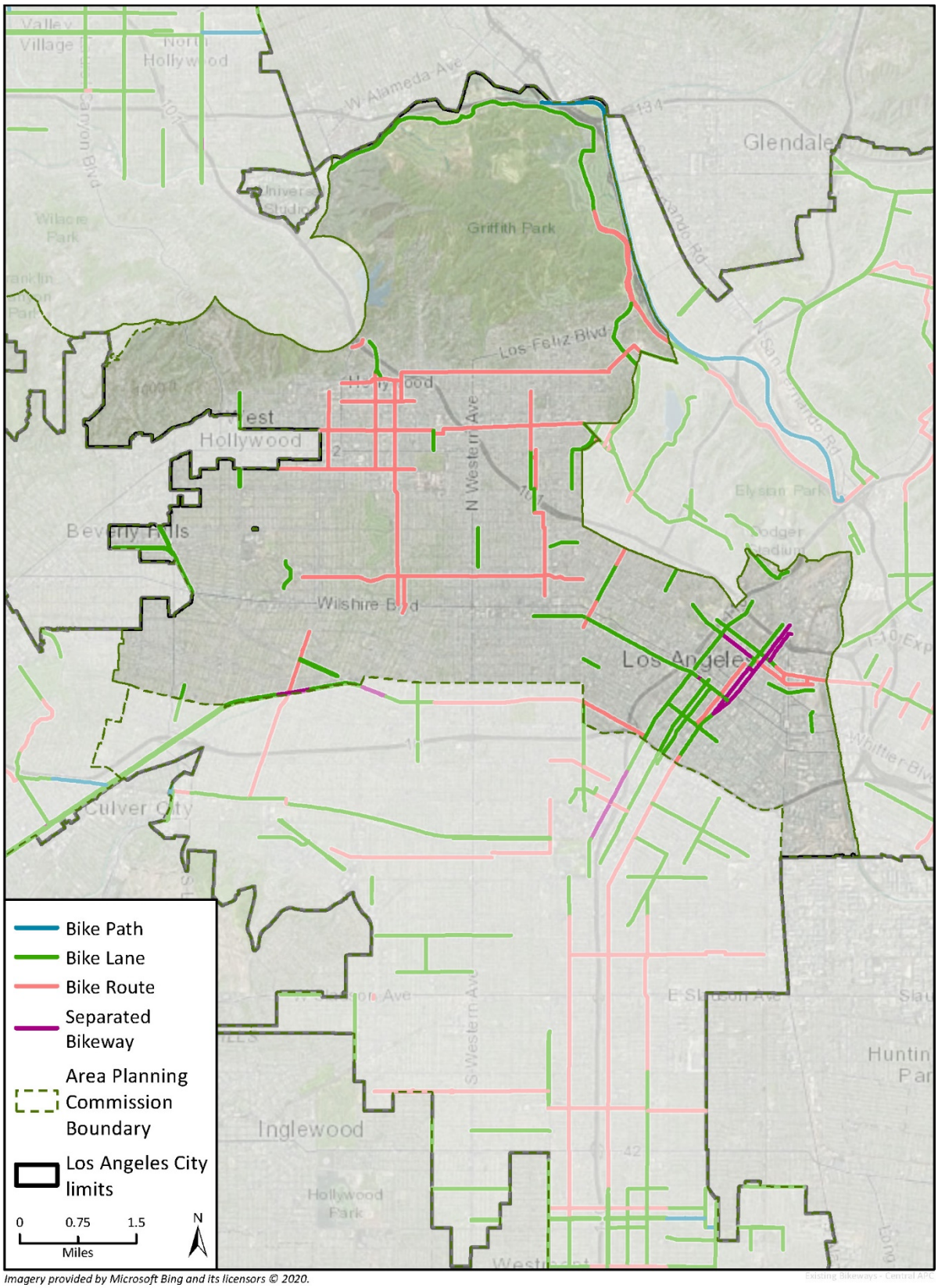


Figure 4.14-3c Existing Bicycle Facilities (Page 3 of 7)

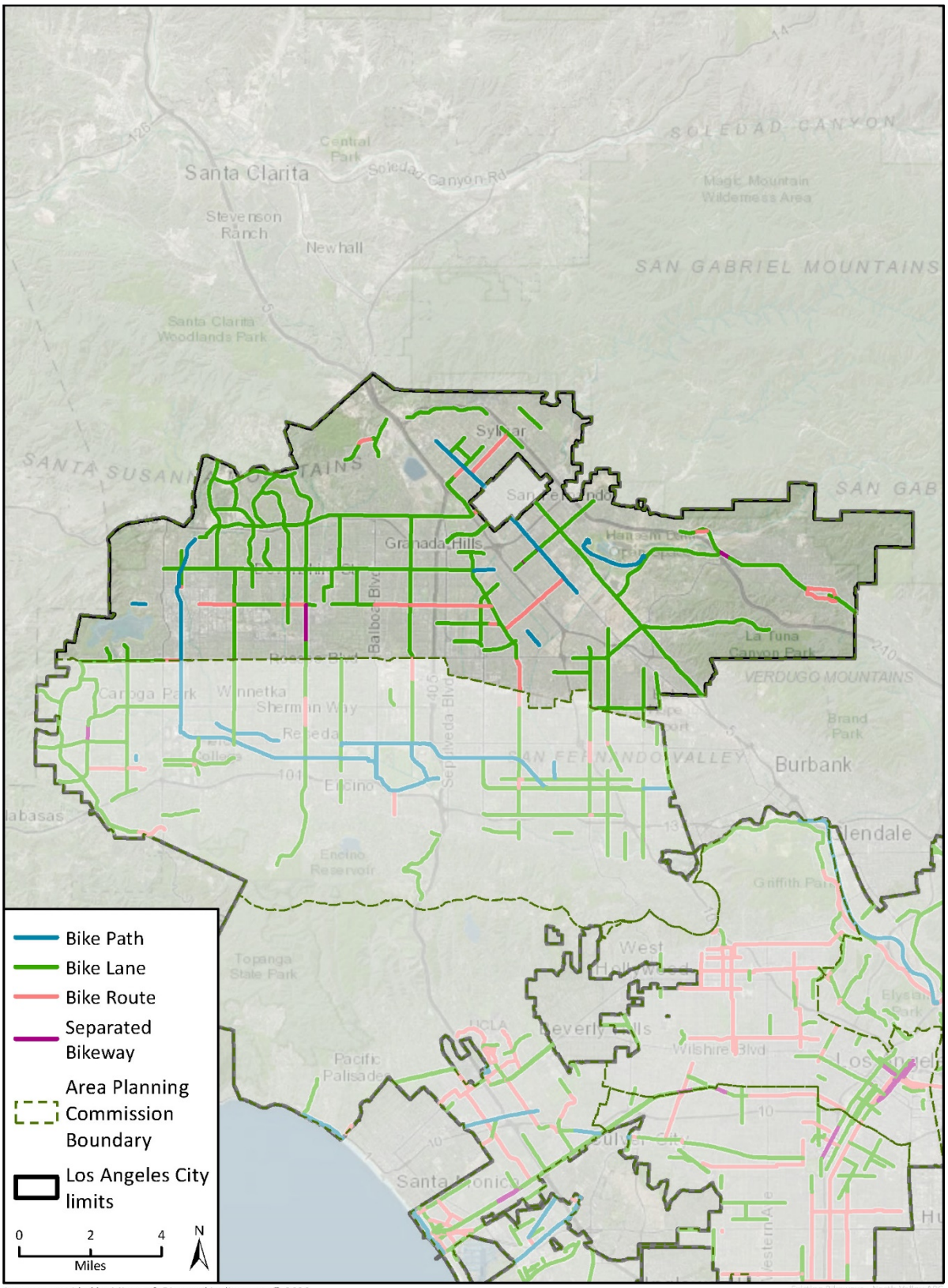


Figure 4.14-3d Existing Bicycle Facilities (Page 4 of 7)

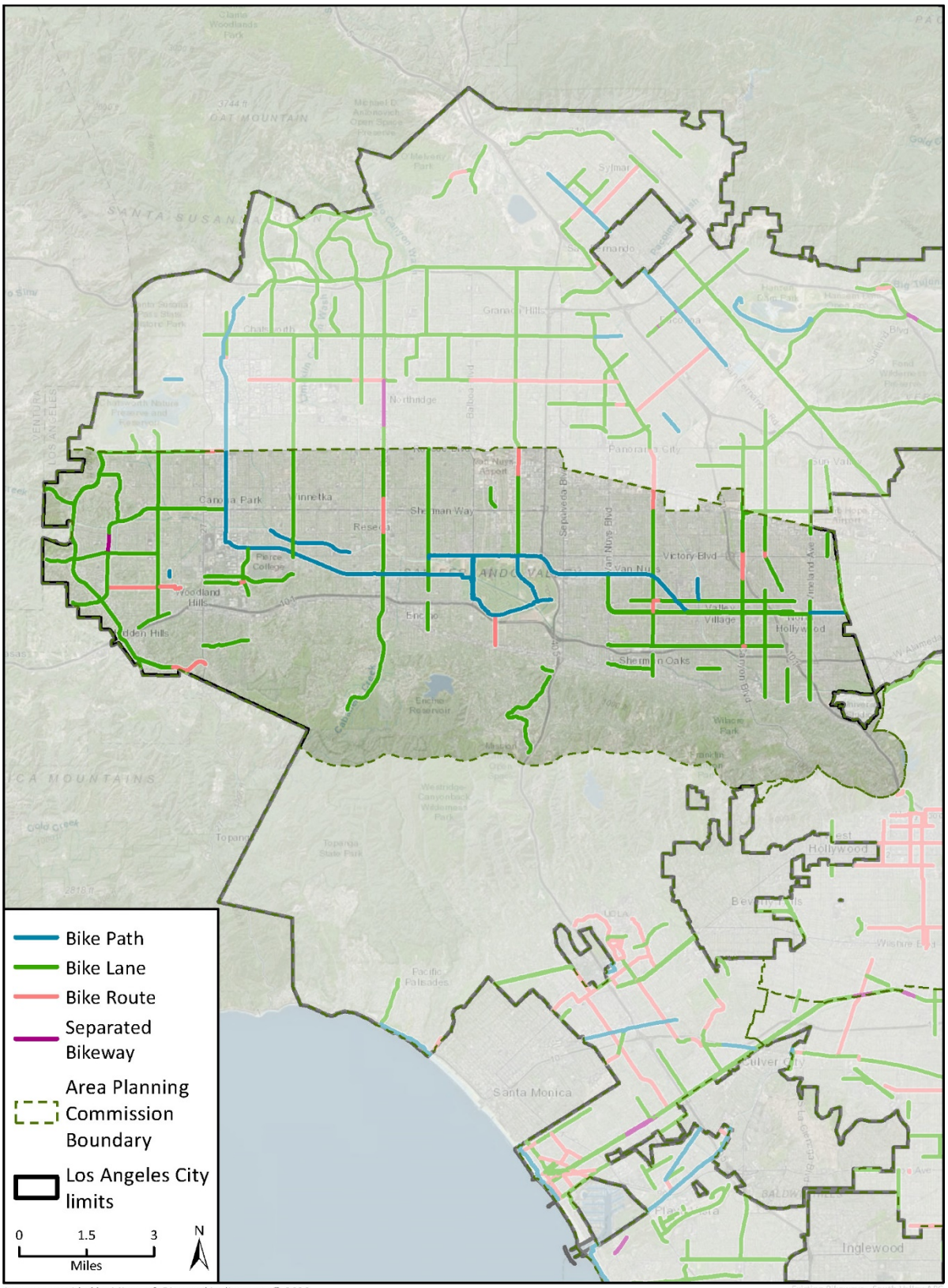


Figure 4.14-3e Existing Bicycle Facilities (Page 5 of 7)

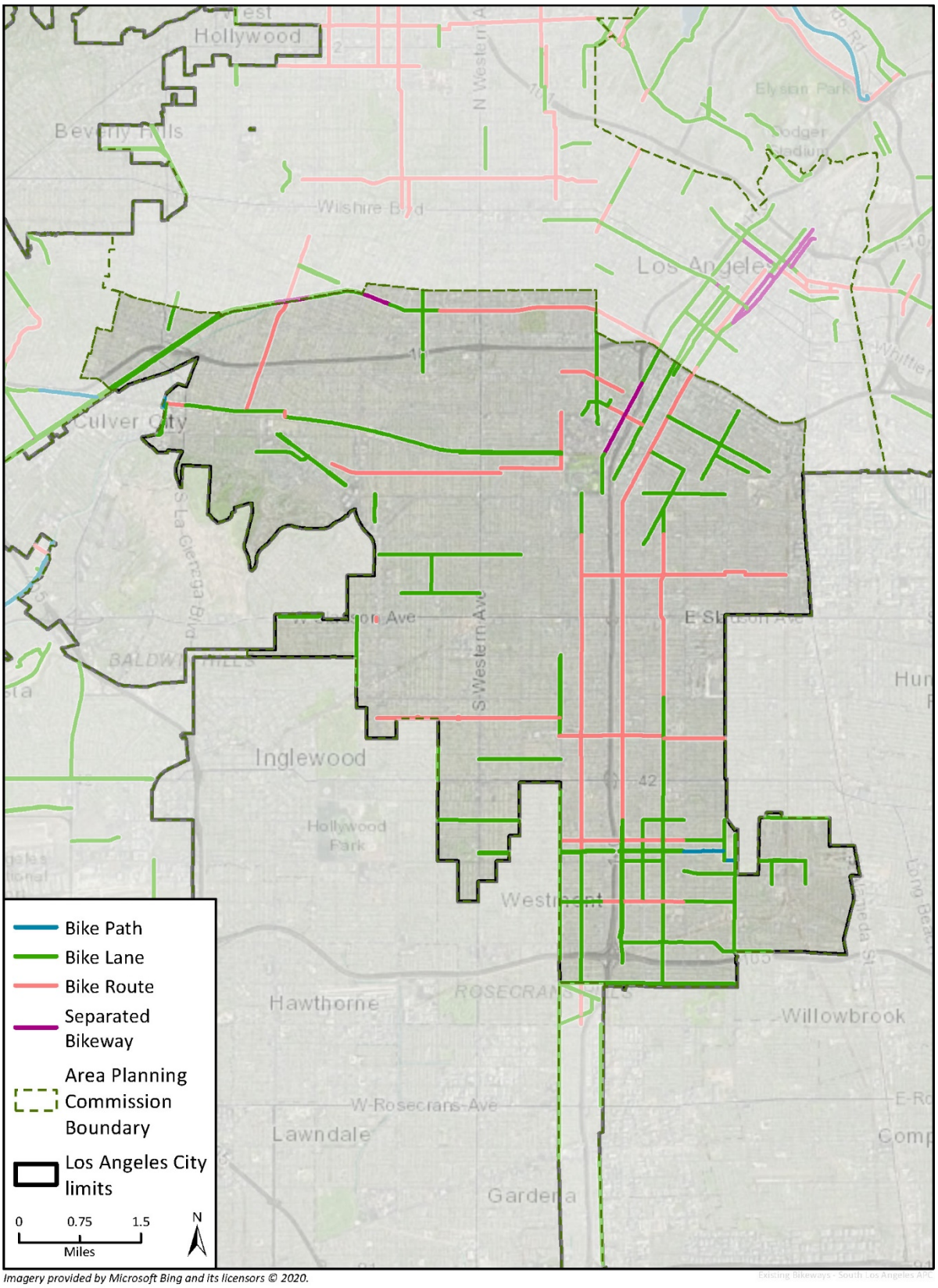


Figure 4.14-3f Existing Bicycle Facilities (Page 6 of 7)

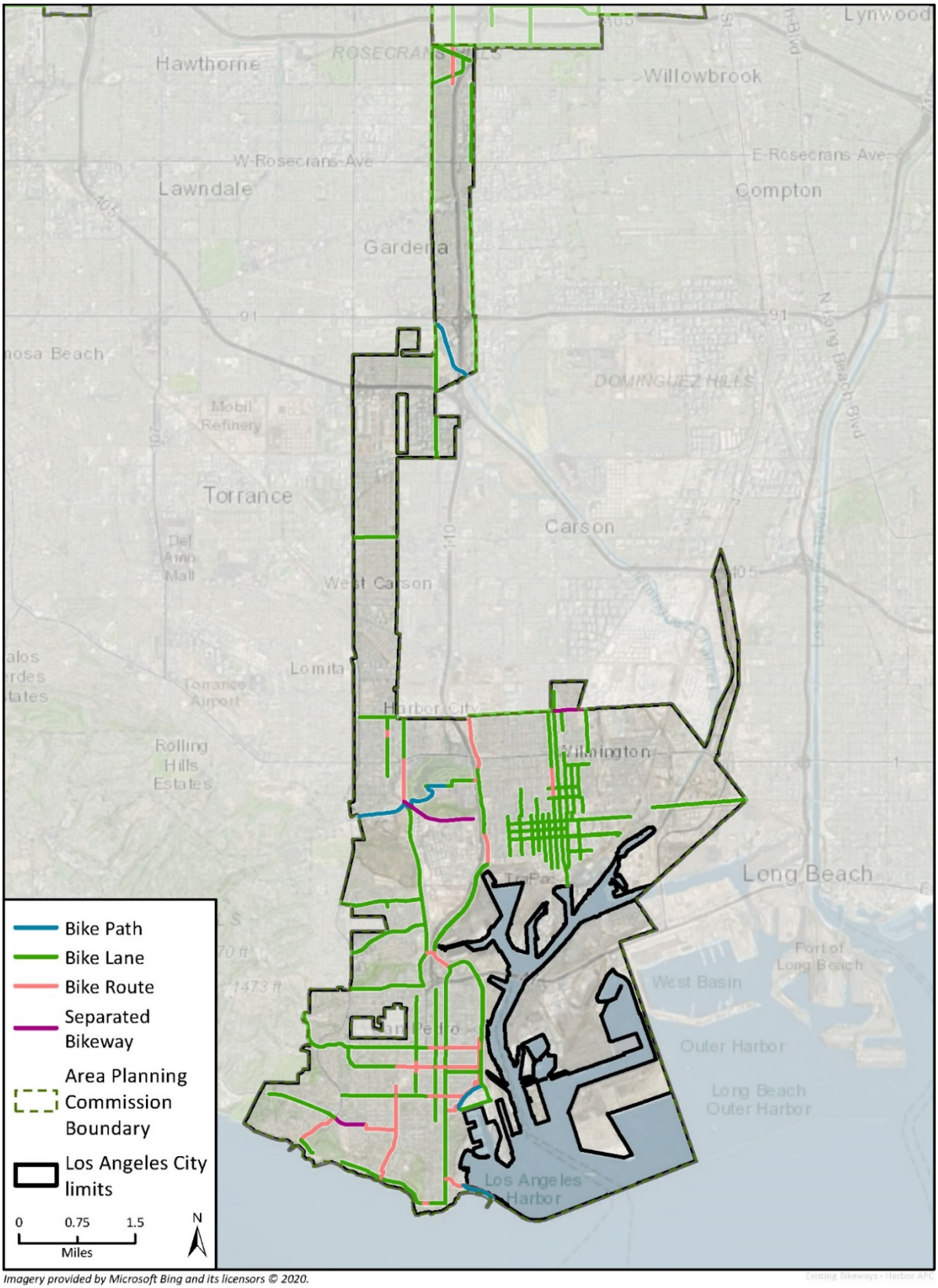
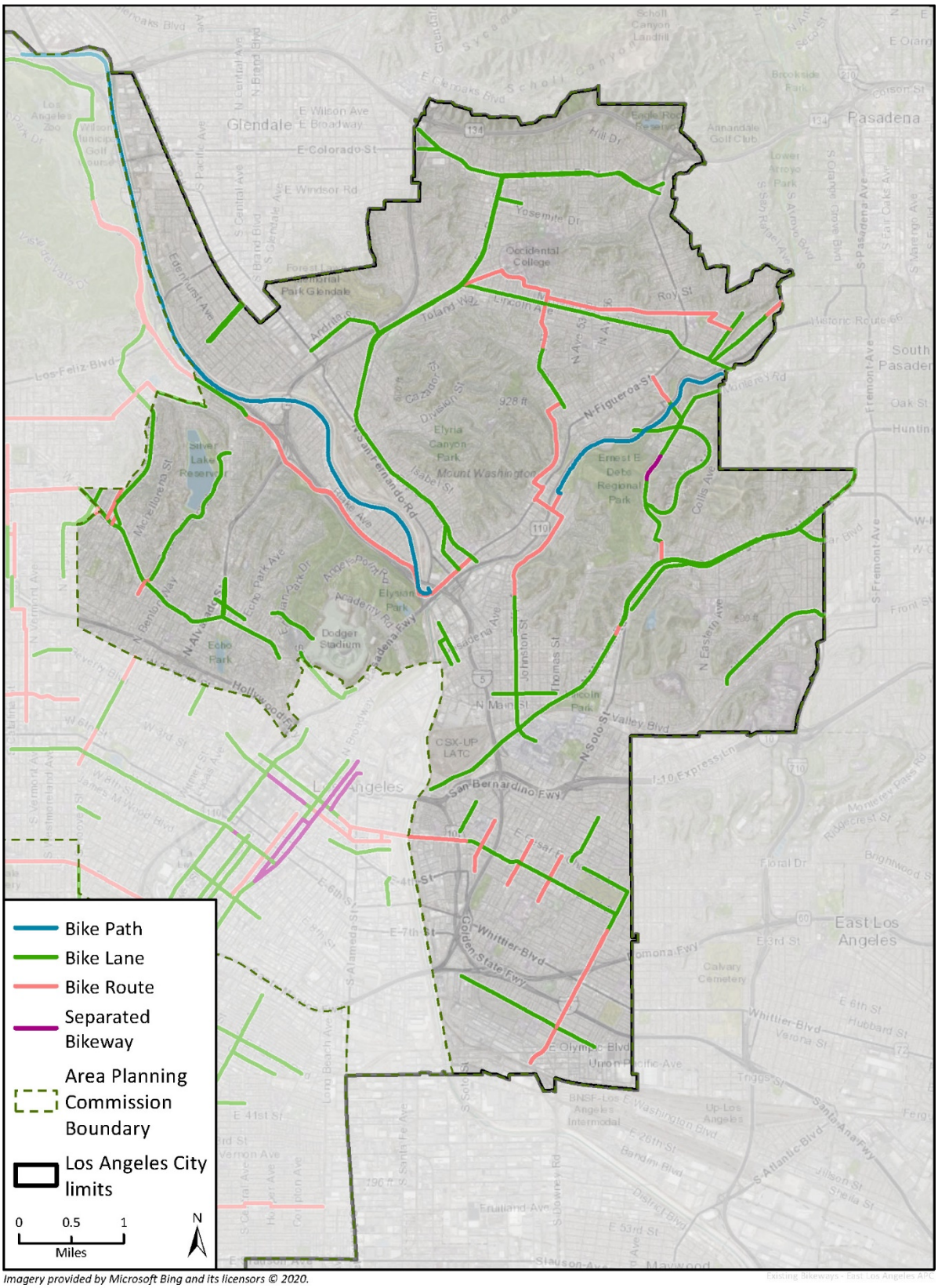


Figure 4.14-3g Existing Bicycle Facilities (Page 7 of 7)



4.14.3 EXISTING CONDITIONS

This section presents existing traffic conditions in terms of vehicle trips and VMT, as required by CEQA, as well as mode split. VMT is a measure of how many miles are being driven within a defined area. Given the proposed Project's focus on housing, only household trips, including trips to work and other destinations, were evaluated. Trips that neither begin nor end at a residential location were excluded from analysis. The household VMT estimated by the City's Travel Demand Forecasting (TDF) model was categorized according to the origin and destination of each trip. Internal-to-internal (II) trips remain within the City of Los Angeles. Internal-to-external (IX) trips originate within the Project Area and terminate at an outside destination. External-to-internal (XI) trips originate outside the Project Area and terminate within it. The VMT calculation accounts for all household internal (II) trips and trips that begin or end (IX or XI) within the City of Los Angeles, as these trips are generated by or attracted to land uses within the Housing Element Update plan area.

VMT is reported as Daily Household VMT per Service Population. The Daily Household VMT per Capita is the home-based production VMT divided by the number of people living within the city or Area Planning Commission (APC). The reported VMT results include only personal vehicles and not truck VMT.

An alternative method for measuring VMT is known as the "boundary method", which accounts for all VMT strictly within the border of a defined area. This method would include VMT for trips passing through, but not originating in or destined for, the Project Area. Although a valid method for measuring VMT, it less effectively measures the regional travel effects of city land uses, and includes travel that passes through the city, which is unrelated to city land uses. This method was not used to calculate VMT for the purposes of this report.

Mode Split

The City of Los Angeles' Travel Demand Forecasting Model estimates the mode split of existing (2021) peak period trips. It is estimated that 79% of peak period person trips are made by automobile, 5% by transit, 14% by walking, and 2% by bicycle. Table 4.14-1 provides this information below.

Table 4.14-1 City of Los Angeles Peak Period Mode Split

	Mode Split (%)				
	Drive Alone	**Share Ride**	**All Auto Trips**	**Transit/Walk/Bike**	**Total**
Los Angeles Citywide	34%	45%	79%	21%	100%

Vehicle Trips

On a typical weekday, travelers take over 5 million home-based trips by automobile that either start from, end at, or both start from and end at a residential location within the City of Los Angeles. More than one third of these trips are taken during the four-hour PM Peak Period between 3:00 and 7:00 p.m. Table 4.14-2 provides this information below.

Table 4.14-2 City of Los Angeles Home-Based Vehicle Trips

		Home-based Vehicle Trips (VT)	
	Capita	VT	VT/Capita
Los Angeles Citywide	4,072,357	5,453,203	1.3

Vehicle Miles Traveled

Motorists drive nearly 36 million vehicle miles during home-based trips on roadways within the City of Los Angeles on an average weekday. Nearly one third of these vehicle miles are traveled during the four-hour PM Peak Period between 3:00 and 7:00 p.m. Table 4-14-3 below provides this information.

Table 4-14-3 City of Los Angeles Home-Based Vehicle Miles Traveled

		Home-based VMT	
	Capita	VMT	VMT/Capita
Los Angeles Citywide	4,072,357	35,971,891	8.8

Transit Ridership

Weekday ridership data reported by Metro, LADOT, Big Blue Bus, and Culver City Bus in 2016 indicate almost 2.18 million daily boardings at transit stops within the City of Los Angeles. Table 4.14-4 presents this information below.

Table 4.14-4 City of Los Angeles Transit Boardings

	Daily Boardings - Weekday
Los Angeles Citywide	1,079,869
Source: Big Blue Bus, Culver City Bus, LADOT, Metro, 2016.	

4.14.4 REGULATORY FRAMEWORK

There are several plans, regulations, and programs that include policies, requirements, and guidelines regarding transportation at the federal, state, regional, and City of Los Angeles levels. As described below, these plans, guidelines, and laws include:

- Americans with Disabilities Act of 1990
- Complete Streets Act
- Assembly Bill 32 and Senate Bill 375
- California Vehicle Code
- Senate Bill 743
- CEQA Guidelines Section 15064.3
- Congestion Management Program
- Southern California Association of Governments 2020-2045 Regional Transportation Plan/Sustainable Communities Strategy
- City of Los Angeles Mobility Plan 2035
- Los Angeles Municipal Code
- LADOT Transportation Assessment Guidelines
- LADOT Manual of Policies and Procedures Section 321
- Vision Zero
- Citywide Design Guidelines

Federal

Americans with Disabilities Act (ADA) of 1990

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 based on 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 through 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.

State

Complete Streets Act

Assembly Bill 1358, the Complete Streets Act (Government Code Sections 65040.2 and 65302), was signed into law by Governor Arnold Schwarzenegger in September 2008. As of January 1, 2011, the law requires cities and counties, when updating the part of a local general plan that addresses roadways and traffic flows, to ensure that those plans account for the needs of all roadway users. Specifically, the legislation requires cities and counties to ensure that local roads and streets adequately accommodate the needs of bicyclists, pedestrians and transit riders, as well as motorists.

At the same time, the California Department of Transportation (Caltrans), which administers transportation programming for the State, unveiled a revised version of Deputy Directive 64 (DD-64-R1 October 2008), an internal policy document that now explicitly embraces Complete Streets as the policy covering all phases of state highway projects, from planning to construction to maintenance and repair.

Assembly Bill 32 (AB 32) and Senate Bill 375 (SB 375)

With the passage of 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 (California ARB) is coordinating the response to comply with AB 32.

On December 11, 2008, California ARB adopted its Scoping Plan for AB 32. This scoping plan included the approval of 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, regional GHG emissions targets: California ARB's Regional Targets Advisory Committee guides 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, are updated every eight years in conjunction with the revision schedule of housing and transportation elements.

Second, MPOs are required to prepare 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 three 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% 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 California Transportation Commission (CTC). Regional Transportation Planning Agencies, cities, and counties are encouraged, but not required, to use travel demand models consistent with the CTC guidelines.

California Vehicle Code (CVC)

The CVC provides requirements for ensuring emergency vehicle access regardless of traffic conditions. Sections 21806(a)(1), 21806(a)(2), and 21806(c) define how motorists and pedestrians are required to yield the right-of-way to emergency vehicles.

Senate Bill (SB) 743

On September 27, 2013, Governor Jerry Brown signed Senate Bill (SB) 743, which went into effect in January 2014. SB 743 directed the Governor's Office of Planning and Research (OPR) to develop revisions to the California Environmental Quality Act (CEQA) Guidelines by July 1, 2014 to establish new criteria for determining the significance of transportation impacts and define alternative metrics for traffic LOS. This started a process that changes transportation impact analysis under CEQA. These changes include elimination of auto delay, LOS, and other similar measures of vehicular capacity or traffic congestion as a basis for determining significant impacts for land use projects and plans in California. Additionally, as discussed further below, as part of SB 743, parking impacts for particular types of development projects in areas well served by transit are not considered significant impacts on the environment. According to the legislative intent contained in SB 743, these changes to current practice were necessary to "more appropriately balance the needs of congestion management with statewide goals related to infill development, promotion of public health through active transportation, and reduction of greenhouse gas emissions."

On January 20, 2016, OPR released the Revised Proposal on Updates to the CEQA Guidelines on Evaluating Transportation Impacts in CEQA, which was an update to Updating Transportation Impacts Analysis in

the CEQA Guidelines, Preliminary Discussion Draft of Updates to the CEQA Guidelines Implementing Senate Bill 743, which had been released August 6, 2014. Of particular relevance was the updated text of the proposed new CEQA Guidelines Section 15064.3 that relates to the determination of the significance of transportation impacts, alternatives, and mitigation measures. Specifically, CEQA Guidelines Section 15064.3, which is discussed further below, establishes VMT as the most appropriate measure of transportation impacts. In November 2018, the California Natural Resources Agency finalized the updates to the CEQA Guidelines and the updated guidelines became effective on December 28, 2018.

Based on these changes, on July 30, 2019, the City of Los Angeles City Council adopted the CEQA Transportation Analysis Update, which sets forth the revised thresholds of significance for evaluating transportation impacts as well as screening and evaluation criteria for determining impacts. The CEQA Transportation Analysis Update establishes VMT as the City's formal method of evaluating a project's transportation impacts. In conjunction with this update, LADOT adopted its Transportation Assessment Guidelines (adopted in July 2019 and updated in July 2020), which defines the methodology for analyzing a project's transportation impacts in accordance with SB 743.

CEQA Guidelines Section 15064.3

As discussed above, recent changes to CEQA include the adoption of Section 15064.3, Determining the Significance of Transportation Impacts. CEQA Guidelines Section 15064.3 establishes VMT as the most appropriate measure of transportation impacts. Generally, land use projects within 0.5 miles of either an existing major transit stop[8] or a stop along an existing high quality transit corridor[9] should be presumed to cause a less than significant transportation impact. Projects that decrease vehicle miles traveled in the project area compared to existing conditions should be presumed to have a less than significant transportation impact. A lead agency has discretion to choose the most appropriate methodology to evaluate VMT, including whether to express the change in absolute terms, per capita, per household or in any other measure. A lead agency may also use models to estimate VMT, and may revise those estimates to reflect professional judgment based on substantial evidence. As discussed further below, LADOT developed City of Los Angeles VMT Calculator Version 1.3 (May 2020) (VMT Calculator) to estimate project-specific daily household VMT per capita and daily work VMT per employee for developments within City limits. The methodology for determining VMT based on the VMT Calculator is consistent with CEQA Guidelines Section 15064.3 and the Transportation Assessment Guidelines.

[8] "Major transit stop" is defined in Public Resources Code Section 21064.3 as a site containing an existing rail transit station, a ferry terminal served by either a bus or rail transit service, or the intersection of two or more major bus routes with a frequency of service interval of 15 minutes or less during the morning and afternoon peak commute periods.

[9] "High-quality transit corridors" are defined in Public Resources Code Section 21155 as a corridor with fixed route bus service with service intervals no longer than 15 minutes during peak commute hours.

Regional

Southern California Association of Governments 2020-2045 Regional Transportation Plan / Sustainable Communities Strategy

In compliance with SB 375, on September 3, 2020, the Southern California Association of Governments (SCAG) Regional Council adopted the Connect SoCal 2020-2045 Regional Transportation Plan/Sustainable Communities Strategy (2020-2045 RTP/SCS), a long-range visioning plan that incorporates land use and transportation strategies to increase mobility options and achieve a more sustainable growth pattern while meeting greenhouse gas reduction targets set by the California Air Resources Board (CARB). The 2020-2045 RTP/SCS contains baseline socioeconomic projections that are used as the basis for SCAG's transportation planning, as well as the provision of services by the six-county region of Imperial, Los Angeles, Orange, Riverside, San Bernardino, and Ventura counties. SCAG policies are directed towards the development of regional land use patterns that contribute to reductions in vehicle miles and improvements to the transportation system.

The 2020-2045 RTP/SCS builds on the long-range vision of SCAG's prior 2016-2040 RTP/SCS to balance future mobility and housing needs with economic, environmental and public health goals. A substantial concentration and share of growth is directed to Priority Growth Areas (PGAs), which include high quality transit areas (HQTAs), Transit Priority Areas (TPAs), job centers, Neighborhood Mobility Areas (NMAs) and Livable Corridors. These areas account for four percent of SCAG's total land area but the majority of directed growth. HQTAs are corridor-focused PGAs within one half mile of an existing or planned fixed guideway transit stop or a bus transit corridor where buses pick up passengers at a frequency of every 15 minutes (or less) during peak commuting hours. TPAs are PGAs that are within a half mile of a major transit stop that is existing or planned. Job centers are defined as areas with significant higher employment density than surrounding areas which capture density peaks and locally significant job centers throughout all six counties in the region. NMAs are PGAs with robust residential to non-residential land use connections, high roadway intersection densities, and low-to-moderate traffic speeds. Livable Corridors are arterial roadways where local jurisdictions may plan for a combination of the following elements: high-quality bus frequency; higher density residential and employment at key intersections; and increased active transportation through dedicated bikeways.

The 2020-2045 RTP/SCS' "Core Vision" prioritizes the maintenance and management of the region's transportation network, expanding mobility choices by co-locating housing, jobs, and transit, and increasing investment in transit and complete streets. Strategies to achieve the "Core Vision" include but are not limited to: Smart Cities and Job Centers, Housing Supportive Infrastructure, Go Zones, and Shared Mobility. Connect SoCal intends to create benefits for the SCAG region by achieving regional goals for

sustainability, transportation equity, improved public health and safety, and enhancement of the regions' overall quality of life. These benefits include but are not limited to a five percent reduction in VMT per capita, nine percent reduction in vehicle hours traveled, and a two percent increase in work-related transit trips.

Local

City of Los Angeles Mobility Plan 2035

In August 2015, the City Council adopted Mobility Plan 2035 (Mobility Plan), which serves as the City's General Plan circulation element. The City Council has adopted several amendments to the Mobility Plan since its initial adoption, including the most recent amendment on September 7, 2016[10]. The Mobility Plan incorporates "complete streets" principles and lays the policy foundation for how the City's residents interact with their streets. The Mobility Plan includes five main goals that define the City's high-level mobility priorities:

(1) Safety First;

(2) World Class Infrastructure;

(3) Access for All Angelenos;

(4) Collaboration, Communication, and Informed Choices; and

(5) Clean Environments and Healthy Communities.

Each of the goals contains objectives and policies to support the achievement of those goals.

Street classifications are designated in the Mobility Plan, and may be amended by a Community Plan, and are intended to create a balance between traffic flow and other important street functions, including transit routes and stops, pedestrian environments, bicycle routes, building design and site access, etc. The Complete Streets Design Guide, which was adopted by the City Council alongside the Mobility Plan, defines the street classifications as follows:

- Arterial Streets: Major streets that serve through traffic and provide access to major commercial activity centers. Arterials are divided into two categories:

[10] Los Angeles Department of City Planning, Mobility Plan 2035: An Element of the General Plan, approved by City Planning Commission on June 23, 2016 and adopted by City Council on September 7, 2016.

  - Boulevards represent the widest streets that typically provide regional access to major destinations and include two further categories, Boulevard I and Boulevard II.
  - Avenues pass through both residential and commercial areas and include three further categories, Avenue I, Avenue II, and Avenue III.
- Collector Streets: Generally located in residential neighborhoods and provide access to and from arterial streets for local traffic and are not intended for cut-through traffic.
- Local Streets: Intended to accommodate lower volumes of vehicle traffic and provide parking on both sides of the street.
  - Continuous local streets that connect to other streets at both ends, and/or
  - Non-Continuous local streets that lead to a dead-end.

The Mobility Plan also identifies enhanced networks of major and neighborhood streets that facilitate multi-modal mobility within the citywide transportation system. This layered approach to complete streets selects a subset of the City's streets to prioritize travel for specific transportation modes. In all, there are four enhanced networks: the Bicycle Enhanced Network, Transit Enhanced Network, Vehicle Enhanced Network, and Neighborhood Enhanced Network. In addition to these networks, many areas that could benefit from additional pedestrian features are identified as Pedestrian Enhanced Districts.

Los Angeles Municipal Code

With regard to construction traffic, Los Angeles Municipal Code (LAMC) Section 41.40 limits construction activities to the hours from 7:00 a.m. to 9:00 p.m. on weekdays and from 8:00 a.m. to 6:00 p.m. on Saturdays and national holidays. No construction is permitted on Sundays.

LAMC Section 12.37 sets forth requirements for street dedications and improvements for new development projects. Specifically, LAMC Section 12.37 states that no building or structure shall be erected or enlarged on any property, and no building permit shall be issued therefore, on any R3 or less restrictive zone, or in any lot in the RD1.5, RD2, or R3 Zones, if the lot abuts a major or secondary highway or collector street unless one-half of the street adjacent to the subject property has been dedicated and improved to the full width to meet the standards for a highway or collector street as provided in the LAMC.

With regard to on-site bicycle parking, LAMC Section 12.21 A.16 sets forth requirements for long-term and short-term bicycle parking for residential and commercial buildings. Where there is a combination of uses on a lot, the number of bicycle parking spaces required shall be the sum of the requirements of the various uses. LAMC Section 12.21 A.16 also includes facility requirements, design standards and siting requirements for bicycle parking.

LAMC Section 12.26 J provides for Transportation Demand Management (TDM) and Trip Reduction Measures that are applicable to the construction of new non-residential gross floor area. Different TDM requirements are provided for developments in excess of 25,000 square feet of gross floor area, 50,000 square feet of gross floor area, and 100,000 square feet of gross floor area. The TDM requirements set forth therein vary depending upon the maximum non-residential gross floor area described above, and include measures such as the provision of a bulletin board, display case, or kiosk with transit information and carpool/vanpool parking spaces.

LADOT Transportation Assessment Guidelines

As discussed above, on July 30, 2019, LADOT updated its Transportation Impact Study Guidelines, travel demand model and transportation impact thresholds based on vehicle miles traveled, pursuant to State CEQA Guidelines Section 15064.3, of the 2019 CEQA Updates that implement SB 743. The City established the Transportation Assessment Guidelines (TAG) that includes both CEQA thresholds (and screening criteria) and non-CEQA thresholds (and screening criteria). LADOT most recently updated the TAG in July 2020. The CEQA thresholds provide the methodology for analyzing the Appendix G transportation thresholds, including providing the City's adopted VMT thresholds. The non-CEQA thresholds provide a method to analyze projects for purposes of entitlement review and making necessary findings to ensure the project is consistent with adopted plans and policies including Mobility Plan 2035. Specifically, the TAG is intended to effectuate a review process that advances the City's vision of developing a safe, accessible, well-maintained, and well-connected multimodal transportation network. The TAG have been developed to identify land use development and transportation projects that may impact the transportation system; to ensure proposed land use development projects achieve site access design requirements and on-site circulation best practices; to define whether off-site improvements are needed; and to provide step-by-step guidance for assessing impacts and preparing Transportation Assessment Studies[11].

LADOT Manual of Policies and Procedures Section 321

LADOT Manual of Policies and Procedures (MPP) Section 321 provides the basic criteria for the review of driveway design. As discussed in MPP Section 321, the basic principle of driveway location planning is to minimize potential conflicts between users of the parking facility and users of the abutting street system, including the safety of pedestrians.

[11] Los Angeles Department of Transportation (LADOT) Transportation Assessment Guidelines. https://ladot.lacity.org/sites/default/files/documents/2020-transportation-assessment-guidelines_final_2020.07.27_0.pdf. Accessed [30th June 2021].

Vision Zero

The Vision Zero Los Angeles program, implemented by LADOT, represents a citywide effort to eliminate traffic deaths in the City by 2025. Vision Zero has two goals: a 20-percent reduction in traffic deaths by 2017 and zero traffic deaths by 2025. In order to achieve these goals, LADOT has identified a network of streets, called the High Injury Network, which has a higher incidence of severe and fatal collisions. The High Injury Network, which was last updated in 2018, represents 6 percent of the City's street miles but accounts for approximately two thirds (64 percent) of all fatalities and serious injury collisions involving people walking and biking.

Citywide Design Guidelines

The Citywide Design Guidelines serve to implement the Framework Element's urban design principles and are intended to be used by City of Los Angeles Department of City Planning staff, developers, architects, engineers, and community members in evaluating project applications, along with relevant policies from the Framework Element and Community Plans. The Citywide Design Guidelines were updated in October 2019 and include guidelines pertaining to pedestrian-first design which serves to reduce VMT.

4.14.5 ENVIRONMENTAL IMPACTS

This section explains the metrics used to measure the impacts of the Housing Element Update to VMT. The metrics used are from the proposed CEQA Guidelines from the California State Office of Planning and Research (OPR) from December 2018.

History

Senate Bill 743 directed OPR to "prepare, develop, and transmit to the Secretary of the Natural Resources Agency for certification and adoption proposed revisions to the guidelines adopted pursuant to Section 21083 establishing criteria for determining the significance of transportation impacts of projects within transit priority areas… Upon certification of the guidelines by the Secretary of the Natural Resources Agency pursuant to this section, automobile delay, as described solely by LOS or similar measures of vehicular capacity or traffic congestion within a transit priority area, shall not support a finding of significance pursuant to this division…".[12]

On January 20, 2016, OPR updated the CEQA Guidelines "Revised Proposal on Updates to the CEQA Guidelines on Evaluating Transportation Impacts in CEQA," the evaluation of vehicle miles traveled

[12] SB 743, 2013-2014 CA State Cong. § 386 (2013)

(VMT) was recognized as "generally the most appropriate measure of transportation impacts." OPR also states that lead agencies may tailor their analysis to include other measures.

On November 2017, OPR proposed a new section, 15064.3, to help determine the significance of transportation impacts. This section was updated July 2, 2018 and finalized on December 28, 2018 with criteria for analyzing transportation impacts and is seen below in the section Thresholds of Significance. Its purpose is to describe specific elements for considering the transportation impacts of a given project given the use of VMT as the primary measurement.

Per the guidance from OPR, "a lead agency may elect to be governed by the provisions of this section immediately. Beginning on July 1, 2020, the provisions of this section shall apply statewide" (CNRA 2018). In order to comply with the guidelines understood to become the standard in our state, this EIR evaluates vehicle trips and VMT consistent with the intent of SB 743.

Performance Metrics

The current metrics shift the focus from level of service (LOS) to vehicle trips (VT) and vehicle miles traveled (VMT). These are defined as follows, with methodology specifics outlined in the following *Methodology* section:

- **Vehicle Trips (VT).** VT are defined as the number of trips undertaken in an automobile, such as in single occupancy vehicles, private automobiles, and vehicles that contain two or more travelers, such as carpools, taxis, or ride-share vehicles. A reduction in VT over time can be used as an indicator of reduced reliance on the automobile as well as an indicator of more travel by carpools.
- **Vehicle Miles Traveled (VMT).** VMT is a measurement of miles traveled (e.g., private automobiles, trucks and buses) by all land uses (e.g., residential, retail, office) in the City of Los Angeles. To compare scenarios, VMT per service population is used. A reduction in VMT overall and in VMT per service population can be used as an indicator of reduced reliance on vehicular travel, primarily by private automobiles.
- **Service Population**. Service Population is the sum of population and employment. It is used in this study to represent both residents and employees. Some VMT metrics focus on VMT per capita and VMT per employee as separate markers of these indications; however, VMT per service population showcases the effects of all vehicular movement in an area. It includes not only trips that are attracted and produced by home and work trips, but those that fit in neither category (i.e. school to grocery store) as well as truck trips. It is therefore more representative of the effect of users and trips on the roadways in this CPA.

Thresholds of Significance

In accordance with Appendix G of the CEQA Guidelines, the Housing Element Update would have a significant impact related to transportation if it would:

- **Threshold 4.14-1:** Conflict with a program, plan, ordinance or policy addressing the circulation system, including transit, roadways, bicycle and pedestrian facilities.
- **Threshold 4.14-2:** Conflict or be inconsistent with CEQA Guidelines Section 15064.3, Subdivision (b).
- **Threshold 4.14-3:** Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment).
- **Threshold 4.14-4:** Result in inadequate emergency access.

In regard to Threshold 4.14-2, the text of CEQA Guidelines Section 15064.3, Subdivision (b) provides in part:

- ***Land Use Projects.*** Vehicle miles traveled exceeding an applicable threshold of significance may indicate a significant impact. Generally, projects within one-half mile of either an existing major transit stop or a stop along an existing high-quality transit corridor should be presumed to cause a less than significant transportation impact. Projects that decrease vehicle miles traveled in the project area compared to existing conditions should be presumed to have a less than significant transportation impact.
- ***Transportation Projects.*** Transportation projects that reduce, or have no impact on, vehicle miles traveled should be presumed to cause a less than significant transportation impact. For roadway capacity projects, agencies have discretion to determine the appropriate measure of transportation impact consistent with CEQA and other applicable requirements. To the extent that such impacts have already been adequately addressed at a programmatic level, such as in a regional transportation plan EIR, a lead agency may tier from that analysis as provided in Section 15152.
- ***Qualitative Analysis.*** If existing models or methods are not available to estimate the vehicle miles traveled for the particular project being considered, a lead agency may analyze the project's vehicle miles traveled qualitatively. Such a qualitative analysis would evaluate factors such as the availability of transit, proximity to other destinations, etc. For many projects, a qualitative analysis of construction traffic may be appropriate.
- ***Methodology.*** A lead agency has discretion to choose the most appropriate methodology to evaluate a project's vehicle miles traveled, including whether to express the change in absolute terms, per capita,

per household or in any other measure. A lead agency may use models to estimate a project's vehicle miles traveled and may revise those estimates to reflect professional judgment based on substantial evidence. Any assumptions used to estimate vehicle miles traveled and any revisions to model outputs should be documented and explained in the environmental document prepared for the project. The standard of adequacy in Section 15151 shall apply to the analysis described in this section.

The Housing Element Update would have an impact related to transportation if it would result in VMT per service population that exceeded an applicable threshold of significance. OPR recommends that a per capita or per employee VMT that is fifteen percent below that of existing development regionally may be a reasonable threshold. However, the "region" identified for the City of Los Angeles is the six-county SCAG region, which is very large and not representative of the City of Los Angeles. Holding the City to that as a threshold would not accurately disclose a relevant change in VMT outputs to that of the City, as the City is significantly lower than the region's VMT already. Additionally, the use of per capita and per employee is not as representative of all travel in the area as per service population. As "CEQA generally defers to lead agencies on the choice of methodology to analyze impacts" (OPR 2018), to analyze significant impacts under Threshold 4.14-2, the City of Los Angeles is choosing to use the following as part of a two-pronged threshold provided in the from the LADOT Transportation Assessment Guidelines identified for land use plans:

- The Proposed Project would result in average total VMT per service population in the plan horizon year that exceeds 15% below the regional average total VMT per service population from the most recent regional metric available.
- The Proposed Project would result in average total VMT per service population in the plan horizon year that exceeds the average total VMT per service population for the "project area" for the baseline year.

Methodology

The transportation analysis for Housing Element Update has been developed through a process that includes the use of the City of Los Angeles Travel Demand Forecasting (TDF) Model for the analysis of the 2021 baseline year and the future 2029 scenario, as well as the use of the SCAG TDF Model for the analysis of the 2016 SCAG RTP/SCS to represent the region. This Methodology section describes the procedures used to assess impacts on the transportation system. It includes an overall discussion of methodology and assumptions, followed by a discussion of how the Housing Element Update is expected to perform in comparison to the thresholds described above.

VMT Methodology

In order to determine whether the socio-economic and transportation network included in the City of Los Angeles would result in an impact (as outlined previously in the *Environmental Impacts* section), VMT calculated for 2021 Baseline and 2016 SCAG Region is compared to the 2029 scenario. This is calculated using the following outputs from the City of Los Angeles and SCAG TDF Models.

Vehicle Trips (VT)

Vehicle Trips are defined as the number of trips undertaken in an automobile or a truck, such as in single-occupancy private automobiles, vehicles that contain two or more travelers, such as carpools, taxis, or ride-share vehicles, and trucks including light truck, medium truck, and heavy truck. While the total number of vehicle trips is expected to increase as growth occurs in the region, a reduction in vehicle trips per service population over time can be used as an indicator of reduced reliance on the automobile as well as an indicator of more travel by walk, bike, take transit, carpools, etc. A reduction in the number of vehicle trips per service population also helps meet the State's goal of reducing GHG emissions, as mandated by AB 32 and SB 375. An increase in the number of daily vehicle trips per service population would be an undesirable outcome of the Housing Element Update but would not constitute a significant impact.

Vehicle trips are calculated from outputs of the City of Los Angeles TDF model and SCAG TDF model. With estimated population relevant to each model's year, household and employment values input into each model Traffic Analysis Zone (TAZ), the models develop a vehicle trip calculation for the City of Los Angeles and SCAG Region. A Traffic Analysis Zone is a spatial unit that includes socioeconomic data such as population, households, and employees of a particular region.

Vehicle Miles Traveled (VMT)

VMT is a measurement of miles traveled (e.g., private automobiles, trucks and buses) generated by all land uses (e.g., residential, retail, office). While the total VMT is expected to increase as growth occurs in the City and in the region, a reduction in VMT per service population over time can be used as an indicator of reduced reliance on the automobile. Reducing VMT helps meet the State's goals of reducing GHG emissions, as mandated by AB 32 and SB 375. Any increase in the total number of VMT per service population would be an undesirable outcome of the Housing Element Update, and would constitute an impact. VMT was forecasted with the City of Los Angeles TDF model.

For this analysis, VMT is reported as Total Daily VMT per Service Population. The Total Daily VMT per Service Population is the total VMT divided by the number of people living or working within the City of Los Angeles. This VMT is generated by both City residents and employees working within City limits.

The reported VMT results include both personal vehicles and truck VMT. The VMT calculation accounts for internal trip ends and trips that begin or end within the City of Los Angeles, as these trips are generated by or attracted to land uses within the City. The travel behavior effects of land use changes in the City can be understood by measuring the VMT of trips originating in and/or destined for the City and comparing them to the 2021 Baseline and 2021 SCAG Region outputs.

VMT is calculated by multiplying the vehicle trip length by the number of trips estimated through the City of Los Angeles TDF model. VMT takes in consideration population, household, and employment values, as well as travel patterns of origins and destinations, including all of these inputs in the City of Los Angeles and SCAG TDF models, which makes them sensitive to each land use and network scenario tested.

Travel Demand Model Development

The City of Los Angeles TDF Model provides the ability to evaluate the transportation system, use performance indicators for land use and transportation alternatives, provide information on regional pass-through traffic versus locally generated trips, and graphically display these results. The model considers forecast growth in City of Los Angeles and surrounding areas, including special generators, such as airports and universities, and is sensitive to emerging land use trends through improved sensitivity to built environment variables. The model forecasts AM and PM peak period and daily vehicle and transit flows on the transportation network in the City. In essence, the travel demand model serves as a tool to implement, manage, and monitor the City of Los Angeles' transportation plans, projects, and programs.

The potential impacts associated with implementation of the Housing Element Update are evaluated using the City of Los Angeles' TDF Model. The City of Los Angeles Travel Demand Forecasting Model utilizes the TransCAD Version 7.0 R4 Build 12410 modeling software. The model has a future horizon year of 2040 and was designed to produce daily and AM and PM peak hour vehicle and transit flows on roadways within the City based on comprehensive land use and socioeconomic data (SED) and uses a conventional 4-step process of trip generation, trip distribution, modal split and assignment. For modeling purposes, the Los Angeles model area is divided into 4,192 Transportation Analysis Zones (TAZs), each with corresponding SED and connections to the roadway and transit networks.

The City of Los Angeles TDF Model was used to generate the 2021 Baseline and 2029 Housing Element Update plan data for the transportation impact analysis. The City of Los Angeles TDF Model's base year is 2016; therefore, the socioeconomic inputs and transportation network within the TDF were updated to represent the 2021 Baseline scenario and the 2029 with Housing Element scenario. To develop the 2021 Baseline scenario, based on the original 2016 base year model, model-wide socioeconomic data and related matrices were interpolated to 2021. Transportation networks were also updated to reflect transportation

projects completed by 2021, according to the SCAG 2020-2045 Regional Transportation Plan/Sustainable Communities Strategy. To develop the 2029 with Housing Element Scenario, based on the original 2040 future year model (i.e., without the development resulting from the 2029 Housing Element Update), model-wide socioeconomic data and related matrices were interpolated to 2029. Transportation networks were also updated to reflect only those transportation projects expected to be completed by 2029 according to the SCAG 2020-2045 Regional Transportation Plan/Sustainable Communities Strategy by removing transportation projects with an expected completion year after 2029.

The RTP/SCS TDF Model, developed by SCAG, was used to generate the 2021 SCAG Region scenario. The 2021 SCAG Region scenario VMT results were interpolated from the off-the-self SCAG base and future year models.

Regulatory Compliance Measures

The City has established regulatory requirements (regulatory compliance measures or RCMs) to minimize the impacts of construction on transportation within the City. Among those, any future housing development accommodated under the Housing Element Update would be required to comply with the following RCM, as applicable:

- **RCM-TRAF-1 (Major Transit and Transportation Construction Impact Area):** As applicable, development is required to comply with Chapter VI, Section 62.250 of the LAMC, which established permitted requirements for projects that intend to perform activity or work in the streets (including sidewalks within the Major Transit and Transportation Construction Impact Area. Major Transit and Transportation Construction Impact Areas include the following:
    - Area E: The area bounded clockwise by North Hill Street, Bernard Street, North Broadway, North Spring Street, Los Angeles River (west bank), and the 101 Freeway.
    - Area F: The area bounded clockwise by North Figueroa Street, Marmion Way, Monte Vista Street, Avenue 61, Piedmont Avenue, Figueroa Street, Pasadena Avenue, North San Fernando Road, and the following street segments: Avenue 50 from Malta Street to Monte Vista Street, Avenue 52 from Figueroa Street to Echo Street, Avenue 54 from Ash Street to Monte Vista Street, Avenue 54 from Figueroa Street to Longfellow Street, Avenue 57 from Figueroa Street to Media Drive, Avenue 60 from Figueroa Street to Echo Street, and Avenue 61 from Terrace Drive to Monte Vista Street.
    - Area G: The area bounded clockwise by Cesar E. Chavez Avenue, North Indiana Street, East 3rd Place, East 4th Street, Alameda Street, East 1st Street, North Hope Street, and North Grand Avenue.
    - Area H: The area bounded clockwise by Victory Boulevard, De Soto Avenue, Vanowen Street, Corbin Avenue, Victory Boulevard, Fulton Avenue, Oxnard Street, Coldwater Canyon Avenue,

Burbank Boulevard, Vineland Avenue, Magnolia Boulevard, Woodman Avenue, Burbank Boulevard, Balboa Boulevard, Oxnard Street, Topham Street, Victory Boulevard, De Soto Avenue, Oxnard Street, and Variel Avenue.

- Area I: The area bounded clockwise by Wilshire Boulevard, Bundy Drive, San Vicente Boulevard, Federal Avenue, Ohio Avenue, Veteran Avenue, Wilshire Boulevard to City Limit, Santa Monica Boulevard, Century Park East, West Pico Boulevard, Centinela Avenue, West Olympic Boulevard, and Centinela Avenue.

Impact Analysis

The purpose of the transportation analysis is to identify potential transportation system deficiencies resulting from vehicle trips generated the changes in housing distribution around the City resulting from build-out of the housing development accommodated under the Housing Element, and to identify feasible mitigation measures, if necessary. The Housing Element Update is a medium-term plan that will be implemented over a number of years in conjunction with already approved development projects, and regional growth and transportation projects outlined in the 2016-2040 RTP/SCS. The Housing Element Update is represented by the 2029 Housing Element Update scenario and is compared to 2021 Baseline and 2021 SCAG Region scenarios in order to show the potential impacts of the plan.

The City of Los Angeles Travel Demand Forecasting Model is consistent with the 2016-2040 SCAG RTP/SCS model and includes all reasonably foreseeable development and regional transportation improvements through the year 2040 in the City of Los Angeles as well as the adjacent cities, such as West Hollywood, Burbank and Glendale. Thus, the City of Los Angeles TDF includes the regional growth forecast for both inside and outside of the City for the purpose of analyzing 2029 Housing Element Update conditions.

The analysis tools used to forecast future travel patterns are long-range models of travel demand. Long-range travel demand models primarily focus on forecasting auto use, with limited sensitivity to other modes of travel such as transit, bicycling, and walking. This is consistent with the traffic forecasting methods used by most cities and is consistent with the state of the transportation and traffic engineering practice. Recently, new travel behavior trends have emerged that traditional travel demand models are not designed to accommodate. Transportation and traffic experts continue to evaluate the anticipated longevity of these trends and the impact they may have on travel behavior in the future. Factors that affect long-term trends in travel behavior include recessionary effects on employment, changes in younger generations' interest in driving and vehicle ownership, baby boomer retirement choices and their continued participation in the workforce, increasing preference across generations for urban living, fuel prices, increased availability of on-demand delivery of goods and services, and greater travel options through autonomous vehicles and shared use mobility (e.g., Lyft, Uber, bikeshare programs). Additionally, it is

likely that some of the recent travel behavior changes associated with the Covid-19 pandemic, including increased telework, increased levels of bicycling and walking, and decreased transit ridership, may either take years to return to baseline conditions or may become permanent.

The transportation analysis approach used in this EIR applies established traffic forecasting tools that have been empirically proven and previously accepted under CEQA. However, these may prove to be conservative if some of the recent trends in travel persist. It is not clear what direction the trends will take at this point. VMT per capita has been generally dropping since around 2004 but increased for many decades prior. If the trends toward higher levels of walking, bicycling, and transit use exceed what is forecast in the EIR, this could result in fewer driving-related impacts than the plan conservatively accounts for in the EIR. It is possible, however, that innovations in autonomous and driverless vehicles, transportation network companies (e.g., Lyft and Uber), and same-day delivery will increase future VMT per capita. A variety of factors contribute to VMT, and transportation technologies along with demographic trends will influence future travel behavior. It would be speculative to make assumptions about how these new technologies and changes in transportation may affect travel behavior long-term; therefore, the methodologies and travel forecasts applied in this analysis rely on the state-of-the-practice at this time as previously accepted under CEQA.

Housing Element Update Mobility Network

Mobility Plan 2035 (MP 2035) is the Mobility Element of the City of Los Angeles' General Plan. MP 2035 provides the framework for future community plan updates, which take a closer look at the transportation system in specific areas of the City and recommend more detailed implementation strategies to be realized by 2035. The MP 2035 reflects policies and programs that lay the foundation for safe, accessible, and enjoyable streets for pedestrians, bicyclists, transit users, and vehicles throughout the City of Los Angeles. MP 2035 was adopted by the City in August 2015 and updated in 2016. It is compliant with the 2008 Complete Streets Act (AB 1358), which mandates that the circulation element of a City's General Plan be modified to plan for a balanced, multimodal transportation network that meets the needs of all users of streets, roads, and highways, defined to include motorists, pedestrians, bicyclists, children, persons with disabilities, seniors, movers of commercial goods, and users of public transportation, in a manner that is suitable to the rural, suburban, or urban context of the general plan. No mobility improvements are envisioned as part of the Housing Element Update, and no mobility elements beyond those already envisioned for the future were included in the 2029 Housing Element Update scenario in the City of Los Angeles TDF model.

4.14.6 IMPACT ANALYSIS

Threshold 4.14-1	Would the Housing Element Update conflict with a program, plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities?

Impact 4.14-1 The Housing Element Update would not conflict with any applicable program, plan, ordinance, or policy relevant to the transportation system, nor would it limit or preclude the City's ability to implement programs and policies in furtherance of climate or equity goals. Implementation of the Housing Element Update supports and furthers both state and local transportation-related climate and congestion goals. By identifying capacity to meet both the City's existing unmet and future housing need, fewer employees who work in the City will need to search beyond the City's boundaries for affordable housing, reducing commute lengths. By encouraging development on infill sites or redevelopment of existing parcels with greater density in high-resource areas around the City already served by public transit, the City will improve residential transit access and possibly increase transit mode share, as well as facilitate the completion of household errands on foot or bike, rather than in a car, all of which would reduce VMT, greenhouse gas emissions, and traffic congestion leading to travel delays. Although it is unlikely based on existing requirements and necessary project review by LADOT, individual housing development projects may have impacts to circulation system during construction based on unique site or project attributes. Mitigation measures 4.14-1 to prepare a construction management plan should avoid these impacts to the circulation system. Therefore, the impact would be ***less than significant with mitigation***.

Impact Analysis

Goals of the Housing Element Update which are relevant to the transportation system include:

- **Goal 1:** A City where housing production results in an ample supply of housing to create more equitable and affordable options that meet existing and projected needs.
- **Goal 3:** A City in which housing helps to create healthy, livable, sustainable, and resilient communities that improve the lives of all Angelenos.

As discussed in the Initial Study, the Housing Element Update helps fulfill existing City of Los Angeles General Plan Framework strategies to encourage growth in higher-intensity commercial and mixed-use districts, centers, and boulevards, and in proximity to transit. The geographic distribution of the identified housing capacity will be consistent with recent build activity and in areas of the City that are currently zoned for multi-family and commercial development, along commercial corridors and in proximity to public transportation. A large portion of the anticipated housing capacity is expected to be located within Transit Oriented Communities Areas, which are defined as the half-mile radius around a Major Transit Stop. Based on the estimated capacity of 266,647 units, and the total target capacity of 486,379 units, the Housing Element finds a need for a Rezoning Program for the creation of 220,000 additional units of capacity. The Rezoning Program, which would need to be completed by 2024, will likely be accomplished through updates to the City's Community Plans (Land Use Element), an update to the City's Density Bonus program, targeted zone changes, updates to specific plans and overlays, or other zoning ordinances. These programs would likely identify opportunities for rezoning or development incentives in areas that are located in a Transit Priority Area, near major job centers, neighborhood services and amenities, and particularly in higher resource areas shown in Figure 3-5 to provide the most equitable distribution of housing opportunities. These programs may also consider rezoning or development incentives in existing lower density residential zones to create opportunities for missing middle housing typologies (up to low-medium residential density) in these areas. The outcome of full build-out of the RHNA under the Housing Element Update would be an increased level of development of infill sites and/or intensification of existing residential parcels, with a majority of the development occurring in locations within the City where neighborhood services are plentiful and multimodal transportation options, including public transit and active modes, are most competitive with driving. This will provide more opportunity for residents to choose housing close to their places of employment, shortening their work trips and perhaps even resulting in a shift in commute mode, and to complete more household-serving trips within their own neighborhoods, whether in a very short trip in a car or on foot or bike. Finally, any rezoning under the rezoning program will need to be found consistent with the General Plan, including the Mobility Plan 2035, pursuant to Charter Section 556 and 558 and pursuant to State Planning and Zoning laws.

The types of housing units anticipated under the 2029 Housing Element Update would generally fall into five categories of development projects – multi-family residential development; single-family residential development; accessory dwelling units (ADU); mixed use development; and conversion and/or rehabilitation of existing nonresidential, residential and mixed-use structures to be used for housing. The majority of all housing types are unlikely to result in a significant transportation impact if located on infill sites or in urbanized areas, as described above. As shown in Tables 4-1 and 4-2, only 10 projects out of the 54 case studies had significant and unavoidable impacts related to transportation. Of those, all were in large multi-family developments on infill sites and had significant and unavoidable

impacts related to operational impacts to congestion thresholds (LOS) under the City's pre-VMT thresholds of significance. None of the projects had significant and unavoidable impacts related to conflicts with programs, plans, ordinances, or policies. Several projects (as discussed below) had less than significant impacts after mitigation to reduce construction-related impacts to the circulation system. Further discussion of the potential for specific housing types to create a significant impact follows.

- **Multi-family residential**: Multi-family residential projects may range in size from small apartment buildings with 2-10 units to larger apartment buildings and high-rise structures with hundreds of units. Large multi-family development projects would likely occur in the High and Highest Resource Tracts as well as other areas of the City that permit multifamily residential use such as areas near transit and jobs, provide the housing necessary to better balance the distribution of jobs and housing, and further many of the policy aims discussed in the regulatory section above regarding reducing VMT, and facilitating multimodal and zero emission travel. As listed in Table 4-2, the 6220 Yucca Street Mixed-Use Project, which is located in the dense neighborhood of Hollywood and plans to provide 210 residential units in a mixed-use setting, did not conflict with any reviewed programs, plans, ordinances, or policies and its impact was determined to be less than significant. For example, as it related to the local Community Plan, "The Project would be consistent with the objectives of the Hollywood Community Plan as the Project would contribute to the development of Hollywood as a major center of population, employment, and retail services… In line with these objectives, the Project would increase housing and jobs in proximity to the Metro Red Line, other regional Metro bus lines, and LADOT DASH lines[13]."
- **Single-family residential:** Single-family residential projects may range in size and scale from smaller single-family homes to larger single-family homes, and from small-lot subdivisions to multi-property single-family subdivisions. Smaller single-family developments would generally occur in residential or undeveloped areas throughout the City and would not result in significant impacts. The TAG does not require transportation assessments for development projects generating fewer than 250 vehicle trips per day. The Institute of Transportation Engineers (ITE) *Trip Generation, 10th Edition*, the industry standard for developing trip generation estimates, estimates that single-family dwelling units generate fewer than 10 daily vehicle trips (9.44). Therefore, generally single-family residential projects would be screened from completing any transportation analysis and would not foreseeably conflict with transportation related plans, program, policy or ordinances. Larger single-family home projects or projects built in undeveloped areas or with unusual site conditions may have potential impacts related to construction impacts.

[13] City of Los Angeles, 2020. "6220 West Yucca Street Mixed Use Project." https://planning.lacity.org/eir/6220Yucca/deir/Draft%20EIR%20Sections/I.%20Introduction.pdf Accessed 2nd July 2021.

The Hidden Creek Estates project planned to develop 188 single-family homes in an undeveloped area of the City near Porter Ranch. The EIR found potential impacts related to construction activities:

> *Project construction may result in temporary lane closures along Browns Canyon Road between De Soto and the project site in order to transport construction equipment on- and off-site. Construction equipment would remain on site until each specific piece of equipment is no longer needed. Truck traffic and lane closures could potentially disrupt traffic flow along adjoining streets. As a result, significant impacts could occur prior to incorporation of mitigation. However, with implementation of MM-TRAF-1, which requires the preparation of a Construction Traffic Management Plan, the impacts would be reduced to a less than significant level. (Hidden Creek RDEIR at IV.M-12)*

The Hidden Creek RDEIR found with imposition of the following mitigation measure, impacts would be less than significant:

> *MM-TRAF-1 Prior to the issuance of demolition permits, the project applicant shall require a Construction Traffic Management Plan to be prepared and submitted to LADOT for review and approval and this plan shall be implemented by the construction contractor during project construction.*

- **ADUs:** ADUs include attached ADUs created through a building addition or conversion of existing floor area and detached ADUs of various scales. ADUs are most likely to occur within existing or proposed residential developments and would not result in significant impacts. The TAG does not require transportation assessments for development projects generating fewer than 250 vehicle trips per day. The Institute of Transportation Engineers (ITE) Trip Generation, 10th Edition, the industry standard for developing trip generation estimates, estimates that single-family dwelling units, to which an ADU is most similar, generate fewer than 10 daily vehicle trips (9.44). ADU projects would not foreseeably conflict with transportation related plans, policies, programs, or ordinances.
- **Mixed use development:** Mixed use development could range in size and scale from neighborhood commercial mixed use with smaller nonresidential uses, to high-rise mixed-use with larger nonresidential uses. Similar to multi-family residential and large single-family residential developments, mixed use developments would likely occur in the High and Highest Resource Tracts as well as other areas of the City that permit multifamily residential use such as areas near transit and jobs. Larger mixed-use development projects would generally be located in urban areas and on infill sites. As listed in Table 4-2, the 6220 Yucca Street Mixed-Use Project, which is located in the dense neighborhood of Hollywood and plans to provide 210 residential units in a mixed-use setting, did not conflict with any reviewed programs, plans, ordinances, or policies and its impact was determined to be less than significant. For example, as it related to the local Community Plan, "The Project would be consistent with the objectives of the Hollywood Community Plan as the Project would contribute to

the development of Hollywood as a major center of population, employment, and retail services… In line with these objectives, the Project would increase housing and jobs in proximity to the Metro Red Line, other regional Metro bus lines, and LADOT DASH lines[14]."

The Soul Project located in the Wilshire Community Plan area proposed a 222,944 square foot mixed use tower with 256 residential units and 2,507 square feet of office floor area and maximum height of 341 feet. The SCEA found potential impacts from construction:

> *Construction activities are expected to be primarily contained within the Project Site boundaries. However, it is expected that construction fences may encroach into the public right-of-way (e.g., sidewalk and roadways) adjacent to the Project Site. The curb lane on Shatto Place, which provides on-street parking, could be used intermittently throughout the construction period for equipment staging, concrete pumping, etc. Temporary traffic controls would be provided to direct traffic around any closures as required in the Construction Management Plan. Travel lanes would be maintained in each direction on Shatto Place throughout the construction period, and emergency access would not be impeded. The use of the public ROW along Shatto Place and 6th Street may require temporary rerouting of pedestrian traffic as the sidewalks fronting the Project Site would be closed. The Construction Management Plan would include safety precautions and procedures for pedestrians and bicyclists including the installation of directional signage and protection barriers. There is no bus stop adjacent to the Project Site that would require any temporary relocation. Onstreet parking is allowed along Shatto Place, so construction fences could result in the temporary loss of approximately 200 linear feet of curb parking on the east side of Shatto Place. Project construction is not expected to create hazards for drivers, bicyclists, or pedestrians as long as commonly practiced safety procedures for construction are followed. Such procedures and other measures (e.g., to address temporary traffic control, lane closures, sidewalk closures, worker travel times, staging, etc.) would be incorporated into the Construction Management Plan (MM TRAF-1). The Project would implement the Construction Management Plan described below to further reduce impacts. Further, additional mitigation measures are provided below to reduce potential construction related traffic and safety impacts that may affect the Young Oak Kim Academy.*

The SCEA identified the following mitigation measures to reduce construction impacts to less than significant:

> *MM TRAF-1: The Applicant shall prepare a detailed Construction Management Plan that shall include, but not be limited to, the following elements, as appropriate:*

[14] City of Los Angeles, 2020. "6220 West Yucca Street Mixed Use Project." https://planning.lacity.org/eir/6220Yucca/deir/Draft%20EIR%20Sections/I.%20Introduction.pdf Accessed 2nd July 2021.

- *Requiring workers and construction trucks to generally travel outside of the peak hours;*
- *Prohibition of construction worker parking on nearby residential streets;*
- *Temporary traffic control during all construction activities encroaching on public rights-of-way to improve traffic flow and safety on public roadways; Scheduling of construction activities to reduce the effect on traffic flow on surrounding arterial streets;*
- *Safety precautions for pedestrians and bicyclists through such measures as alternate routing and protection barriers as appropriate;*
- *Scheduling of construction-related deliveries so as to generally occur outside the commuter peak hours; and*
- *Installation of appropriate traffic signs around the Project Site to ensure pedestrian, bicycle, and vehicle safety*

MM TRAF-2: There shall be no staging or parking of construction vehicles, including vehicles to transport workers on any of the streets adjacent to the school.

MM TRAF-3: LADBS shall assign specific haul route hours of operation based upon Young Oak Kim Academy's hours of operation.

MM TRAF-4: Haul route scheduling shall be sequenced to minimize conflicts with pedestrians, school buses and cars at the arrival and dismissal times of the school day. Haul route trucks shall not be routed past the school during periods when school is in session especially when students are arriving or departing from the campus.

MM TRAF-5: The Applicant shall plan construction and construction staging as to maintain pedestrian access on adjacent sidewalks throughout all construction phases. This requires the applicant to maintain adequate and safe pedestrian protection, including physical separation (including utilization of barriers such as K-Rails or scaffolding, etc) from work space and vehicular traffic and overhead protection, due to sidewalk closure or blockage, at all times. Temporary pedestrian facilities shall be adjacent to the Project Site and provide safe, accessible routes that replicate as nearly as practical the most desirable characteristics of the existing facility. Covered walkways shall be provided where pedestrians are exposed to potential injury from falling objects. Applicant shall keep sidewalk open during construction until only when it is absolutely required to close or block sidewalk for construction staging. Sidewalk shall be reopened as soon as reasonably feasible taking construction and construction staging into account.

Similarly, with the College Station Project, a project to construct 770 dwelling units with 51,390 square feet of retail, restaurant and other commercial uses in the Arts District area of Downtown, the EIR

identified a construction management plan as a mitigation measure to reduce potential construction impacts to circulation to less than significant level:

Construction traffic during the grading/excavation phase of Project construction could result in temporary impacts at two intersections in the study area, Broadway and College Street (No. 20) and Avenue 18 and Broadway/Spring Street (No. 27), although Intersection No. 27 is expected to be improved as part of the Sixth Street Viaduct Widening project by the time Project construction commences. Project construction could also create temporary access, transit, and parking impacts. The following mitigation measure would reduce these temporary Project construction impacts to less than significant levels.

MM-TRAF-1 (Construction Management Plan): A detailed Construction Management Plan, including street closure information, detour plans, haul routes, and staging plans shall be prepared and submitted to the City for review and approval. The Construction Management Plan will formalize how construction would be carried out and identify specific actions that would be required to reduce effects on the surrounding community. The Construction Management Plan shall be based on the nature and timing of the specific construction activities and other projects in the vicinity of the Project Site, and shall include the following elements:

- *Prohibition of construction worker parking on any adjacent residential streets*
- *Encouragement of carpool/vanpool of workers*
- *Prohibitions on construction-related vehicles parking on surrounding public streets*
- *Prohibitions on construction equipment or material deliveries within the public right-of-way*
- *Provisions for temporary traffic control during all construction activities adjacent to public right-of-way to improve traffic flow on public roadways (e.g., flag men)*
- *Scheduling of construction activities to reduce the effect on peak hour traffic flow on surrounding arterial streets*
- *Rerouting of construction trucks to reduce travel on congested streets with poor LOS intersections*
- *Provisions of safety precautions for pedestrians and bicyclists through alternate routing and protection barriers*
- *Provisions to accommodate the staging and storage of equipment Scheduling of construction-related deliveries to reduce travel during commuter peak hours*
- *Obtain truck haul route approval from the City prior to issuance of any permit for the Project, which is requested to run north from the Project Site along N. Spring Street, where it would be able to access I-5 southbound and I-10 eastbound as set forth in the Project's tract map application, per the City's Mobility Plan 2035 (College Station DEIR at p. 4.13-50 to 51)*

- **Conversion and/or rehabilitation:** Existing non-residential, residential, and mixed use structures could be converted or rehabilitated for new residential uses. The conversion or rehabilitation of existing properties would not involve new construction but may result in full-time residents in structures that were previously not occupied by residents. Converted or rehabilitated structures could contain any of the previously discussed housing typologies (with the exception of ADUs) and would be only as likely or unlikely to create significant impacts to transportation as the housing typology developed within them.

Based on the above, the large majority of housing development accommodated by the Housing Element Update would generally not conflict with any applicable program, plan, ordinance, or policy relevant to the transportation system, nor would it limit or preclude the City's ability to implement programs and policies in furtherance of climate or equity goals. However, larger projects or projects with unique site conditions or project attributes may have impacts from construction to the circulation system. Therefore, impacts are ***potentially significant***.

Mitigation Measures

4.14-1 (Construction Management Plan)

Any discretionary project that LADOT determines will have potential impacts to the circulation system even with application of existing regulatory compliance measures, shall prepare a detailed Construction Management Plan (CMP), including street closure information, detour plans, haul routes, and staging plans shall be prepared and submitted to LADOT for review and approval. The Construction Management Plan will formalize how construction would be carried out and identify specific actions that would be required to reduce effects on the surrounding community. The Construction Management Plan shall be based on the nature and timing of the specific construction activities and other projects in the vicinity of the Project Site, and shall include those elements required by LADOT for the project, which may include but are not limited to the following:

- Providing for temporary traffic control during all construction activities adjacent to public right of way to improve traffic flow on public roadways (e.g., flag men)
- Prohibition of construction worker parking on any adjacent residential streets
- Encouragement of carpool/vanpool of workers
- Prohibitions on construction-related vehicles parking on surrounding public streets
- Prohibitions on construction equipment or material deliveries within the public right-of-way
- Accommodation of all equipment on site as feasible

- Provisions for temporary traffic control during all construction activities adjacent to public right-of-way to improve traffic flow on public roadways (e.g., flag men)
- Scheduling of construction activities, including deliveries, to reduce the effect on peak hour traffic flow on surrounding arterial streets
- Rerouting of construction trucks to reduce travel on congested streets to the extent feasible
- Provisions of safety precautions for pedestrians and bicyclists through alternate routing and protection barriers and signage
- Provisions to accommodate the staging and storage of equipment
- Scheduling of construction-related deliveries to reduce travel during commuter peak hours
- Obtain necessary permits for any truck hauling from the City prior to issuance of any permit for the project.
- Noticing and coordination with any nearby schools that may be affected by construction activities, including deliveries, hauling and other construction transportation, to ensure safety of school children.
- Ensuring all feasible safety measures are taken to accommodate safe travel of pedestrian, bicyclists, and other users of the sidewalks around the construction site, including but not limited through the following measures:
    - Construction staging as to maintain pedestrian access on adjacent sidewalks throughout all construction phases.
    - Maintaining adequate and safe pedestrian protection, including physical separation (including utilization of barriers such as K-Rails or scaffolding, etc.) from work space and vehicular traffic and overhead protection, due to sidewalk closure or blockage, at all times.
    - Providing temporary pedestrian facilities adjacent to the Project Site and provide safe, accessible routes that replicate as nearly as practical the most desirable characteristics of the existing facility.
    - Covered walkways shall be provided where pedestrians are exposed to potential injury from falling objects.
    - Keeping sidewalk open during construction until only when it is absolutely required to close or block sidewalk for construction staging.
    - Reopening the sidewalk as soon as reasonably feasible taking construction and construction staging into account.

Significance after Mitigation

With implementation of the mitigation measures and existing regulations and project review by LADOT, impacts would be ***less than significant.***

Threshold 4.14-2	Would the Housing Element Update conflict or be inconsistent with CEQA Guidelines Section 15064.3, subdivision (b)?

Impact 4.14-2 The Housing Element Update would not conflict or be inconsistent with CEQA Guidelines Section 15064.3, subdivision (b). The VMT results from the 2029 Housing Element Plan fulfill the dual requirements of being both 15% below the regional average VMT and not exceeding the baseline project area VMT.

While individual housing development projects accommodated by the Housing Element Update may exceed the development project specific threshold, it would not result in impacts from the Housing Element Update. While it is uncommon, there may be instances where some housing projects have impacts based on the project location and unique project characteristics. Housing development projects that exceed the project threshold may use mitigation measure MM 4.14-2 to prepare a TDM plan to reduce impacts to below the City's project thresholds to extent feasible. But they may still have significant impacts. However, at the plan level build out of the RHNA under the Housing Element Update is not anticipated to increase VMT. Therefore, the impact would be ***less than significant***.

Impact Analysis

The Housing Element Update would have an impact if its VMT exceeds either of the following:

- The Housing Element Plan results in average VMT per service population for the 2029 City of Los Angeles Housing Element Plan exceeds 15% below the regional average total VMT per service population from 2021 SCAG Region.
- The Housing Element Plan results in average total VMT per service population for the 2029 City of Los Angeles Housing Element Plan that exceeds the average total VMT per service population from the 2021 Baseline.

Table 4.14-5 shows vehicle trips and VMT for the 2021 SCAG Region conditions and 2029 Housing Element Update conditions, and Table 4.14-6 shows vehicle trips and VMT for the 2021 Baseline conditions and 2029 Housing Element Update conditions. As shown in Table 4.14-5, full build-out of the 2029 Housing Element

Update would result in a 34% decrease in VMT compared to 2021 SCAG Region conditions, and does not exceed the 15% below the regional average total VMT per service population threshold. As shown in Table 4.14-6, full build-out of the 2029 Housing Element Update would result in a 2% decrease in service population VMT compared to 2021 citywide Baseline conditions and does not exceed the average total VMT per service population threshold. Therefore, the Housing Element Update impact related to VMT is ***less than significant.***

Table 4.14-5 Future Total Vehicle Miles Traveled (VMT) Compared to SCAG Region

Metric	2021 SCAG Region Conditions	2029 City of LA with Housing Element	Percent Difference
Total Daily VT	81,981,938	18,418,177	N/A*
Total Daily VT per Service Population	3	2.9	-3%
Total Daily VMT	919,653,837	138,345,651	N/A*
Total Daily VMT per Service Population	33.1	22.0	-34%
* Notes: Comparison here is not applicable as the conditions represented come from different geographic areas, the SCAG region and the City of Los Angeles respectively			

Table 4.14-6 Future Total Vehicle Miles Traveled (VMT) Compared to Citywide Baseline

Metric	2021 Los Angeles Model Citywide	2029 City of LA with Housing Element	Percent Difference
Total Daily VT	17,547,267	18,418,177	
Total Daily VT per Service Population	2.9	2.9	0%
Total Daily VMT	133,113,557	138,345,651	
Total Daily VMT per Service Population	22.4	22.0	-2%

The types of housing units anticipated under the Housing Element Update would generally fall into five categories of development projects – multi-family residential development; single-family residential development; accessory dwelling units (ADU); mixed use development; and conversion and/or rehabilitation of existing nonresidential, residential and mixed-use structures to be used for housing. The potential to impact transportation would vary according to project housing unit type. The City of Los Angeles has established plan-level thresholds, which have been applied to the evaluation of the 2029 Housing Element Update. Individual projects will be assessed in accordance with LADOT Transportation Assessment Guidelines thresholds for development projects. At a plan level, the 2029 Housing Element Update does not result in a significant impact to VMT. At the individual project level, utilizing a different evaluation methodology and with different thresholds, some projects may result in impacts to VMT. For the most part, however, development of new housing in existing neighborhoods where services already exist, as envisioned by the 2029 Housing Element Update, results in a reduction to VMT. For example, a multi-family development developed in a dense urban environment with multiple

land uses and access to transit may reduce vehicle trip lengths as there are options for people to undertake their trips more locally, rather than needing to travel outside their neighborhood to meet their needs.

According to the first annual report from LADOT to the City Council on the VMT threshold (Council File No. 14-1169, dated September 16, 2020), only three projects had significant and unavoidable impacts under the VMT threshold in the time period from August 2019 to July 2020, whereas, in the year prior to adoption of VMT thresholds, there were 11 projects with significant and unavoidable impacts related to LOS impacts. Similarly, as it relates to projects which required mitigation, 28 projects required mitigation for transportation impacts to LOS in the year prior to adoption of VMT thresholds, whereas in the first year the VMT threshold was in place, only 23 projects required mitigation. VMT mitigation measures generally include:

- Unbundled parking
- Carshare or carpooling
- Bike parking
- Bicycle Network Improvements
- Bikeshare programs
- Pedestrian network improvements
- Provide transit passes
- Facilitate telework with dedicated spaces or technology
- First-last mile shuttles
- TDM promotion and marketing

An example of a housing development project that was shown to have significant and unavoidable impacts under the City's project-based VMT thresholds is the Violet project (not discussed in Table 4-2). The Violet project, located on an almost 100,000 square foot site in the Arts District of the Downtown area, proposed a 36-story residential tower with 347 new live-work units and approximately 22,000 square feet of commercial floor area. The EIR found the following in regard to VMT impacts:

> *The VMT Calculator was used to evaluate Project VMT and compare it to the VMT impact criteria. The VMT Calculator was set up with the Project's four land uses and their respective sizes as the primary input. Based on the Project's proposed land uses and location, the following assumptions were identified in the VMT Calculator:*

- *Total Population: 782*
- *Total Employees: 837*
- *APC: Central*
- *TBZ: Suburban Center*
- *Maximum VMT Reduction: 20 percent*

Using these assumptions, the Project is estimated to result in 5,318 daily vehicle trips and a total daily VMT of 37,176, resulting in a daily household VMT per capita of 9.3 and a daily work VMT per employee of 9.1, which exceed the thresholds for the Central APC of 6.0 and 7.6, respectively. Thus, the Project is projected to have a significant impact on both household and work VMT as estimated by the VMT calculator. Since the restaurant component of the Project is less than 50,000 square feet, it is considered to be a small-scale and local-serving retail use under the TAG screening criteria. The restaurant space is intended to serve primarily Project residents and office workers. Accordingly, per the TAG, VMT impacts from this portion of the Project would be less than significant.

The EIR identified the following mitigations:

Mitigation Measure TR-MM-1: The Project shall prepare a TDM program. TDM program elements could include measures such as unbundled parking although the exact measures will be determined when the plan is prepared. The City of Los Angeles requires that the TDM plan be prepared during construction, with the final TDM plan approved by LADOT prior to the City's issuance of the certificate of occupancy for the Project. Implementation of the TDM plan occurs after building occupancy. TDM strategies applicable for the residential component:

Unbundled Parking—Unbundling parking typically separates the cost of purchasing or renting parking spaces from the cost of purchasing or renting a dwelling unit. Saving money on a dwelling unit by forgoing a parking space acts as an incentive that minimizes auto ownership. Similarly, paying for parking (by purchasing or leasing a space) acts as a disincentive that discourages auto ownership and trip-making.

TDM strategies applicable for the office component:

Required Commute Trip Reduction Program—This strategy involves the development of an employee-focused travel behavior change program that targets individual attitudes, goals, and travel behaviors, educating participants on the impacts of their travel choices and the opportunities to alter their habits. The program typically includes elements such as a coordinated ride-sharing or carpooling program, vanpool program, alternative work

schedule program, preferential carpool parking, guaranteed ride home service, and a program coordinator. The program requires the development of metrics to evaluate success, program monitoring, and regular reporting.

TDM strategies applicable for both the office and residential components:

Promotions and Marketing—This strategy involves the use of marketing and promotional tools to educate and inform travelers about site-specific transportation options and the effects of their travel choices. This strategy includes passive educational and promotional materials, such as posters, info boards, or a website with information that a traveler could choose to read at their own leisure. It can also include more active promotional strategies such as gamification.

With mitigation measures, the EIR concluded impacts would still be significant and unavoidable from the housing component:

With implementation of Mitigation Measure TR-MM-1, the estimated total daily vehicle trips are projected to be reduced to 4,926 and the estimated total daily VMT reduced to 34,480. The daily work VMT per employee is estimated to be reduced by 18 percent to 7.5, which would no longer be a significant impact under the City's criteria. The daily household VMT per capita is projected to be reduced to 7.7, which is a reduction of 17 percent from the unmitigated value of 9.3 but would still constitute a significant impact under the City's criteria. Therefore, impacts would be significant and unavoidable.

However, as shown, even with some individual housing development projects exceeding VMT project thresholds, the Housing Element Update would not exceed the City's threshold of significance. Therefore, impacts are ***less than significant***.

Mitigation Measures

The following mitigation measure may be used by discretionary projects that show potentially significant impacts to VMT:

4.14-2 Transportation Demand Management Program

The Project shall prepare a TDM program to reduce VMT impacts below the City's project threshold to the extent feasible. TDM program elements could include measures such as unbundled parking although the exact measures will be determined when the plan is prepared. The City of Los Angeles requires that the TDM plan be prepared during construction, with the final TDM plan approved by LADOT prior to the City's issuance of the certificate of occupancy for the Project. Implementation of

the TDM plan occurs after building occupancy. TDM measures shall include but not be limited to the following examples:

TDM strategies applicable for the residential component:

Unbundled Parking—Unbundling parking typically separates the cost of purchasing or renting parking spaces from the cost of purchasing or renting a dwelling unit. Saving money on a dwelling unit by forgoing a parking space acts as an incentive that minimizes auto ownership. Similarly, paying for parking (by purchasing or leasing a space) acts as a disincentive that discourages auto ownership and trip-making.

TDM strategies applicable if the project includes an office component:

Required Commute Trip Reduction Program—This strategy involves the development of an employee-focused travel behavior change program that targets individual attitudes, goals, and travel behaviors, educating participants on the impacts of their travel choices and the opportunities to alter their habits. The program typically includes elements such as a coordinated ride-sharing or carpooling program, vanpool program, alternative work schedule program, preferential carpool parking, guaranteed ride home service, and a program coordinator. The program requires the development of metrics to evaluate success, program monitoring, and regular reporting.

TDM strategies applicable for both the office and residential components:

Promotions and Marketing—This strategy involves the use of marketing and promotional tools to educate and inform travelers about site-specific transportation options and the effects of their travel choices. This strategy includes passive educational and promotional materials, such as posters, info boards, or a website with information that a traveler could choose to read at their own leisure. It can also include more active promotional strategies such as gamification.

Significance After Mitigation

Even with the above mitigation measures, some projects, like the Violet Project, will not be able to reduce VMT to less than significant level. However, even with some housing development projects accommodated by the Housing Element Update having significant impacts, as discussed above, the Housing Element Update has a ***less than significant impact*** to VMT under the City's thresholds of significance.

Threshold 4.14-3	Would development accommodated by the Housing Element Update substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment).

Impact 4.14-3 All housing developments accommodated by the Housing Element Update would be reviewed by the appropriate City staff to ensure consistency with all applicable City design standards, including standards on driveway number, location, and design, sight lines, and roadway modifications. The majority of projects would not be likely to have impacts related to hazards to geometric designs or incompatible uses. However, larger projects or projects with unique site conditions or attributes may result in potential impacts from construction activities. With mitigation measures to require a construction management plan, impact would be expected to ensure the development does not result in increased hazards due to a geometric design feature or incompatible use during construction. Build out of the RHNA may contributed to queuing on off-ramps that lead to unsafe speed differentials. Although it is anticipated that LADOT and Caltrans would identify impacts during project review and provide mitigation without specific information, impacts may occur. The impact related to construction is ***less than significant with mitigation***. Impacts related to highway safety as a result of design features or incompatible uses would be ***significant and unavoidable***.

Impact Analysis

Construction Related Impacts

Any development proposal would be reviewed by the City for consistency with all City regulations, standards, and policies, including as they result to geometric design features, including the number and placement of driveways, lines of sight, and any necessary roadway modifications. It is assumed that any projects developed as a result of the Housing Element Update would be designed to meet all City standards such that they do not result in geometric design hazards.

The types of housing units anticipated under the 2029 Housing Element Update would generally fall into five categories of development projects – multi-family residential development; single-family residential development; accessory dwelling units (ADU); mixed use development; and conversion and/or rehabilitation of existing nonresidential, residential and mixed-use structures to be used for housing. As stated above, all housing types would be reviewed by the City prior to development to ensure consistency with all City regulations, standards, and policies regarding design and access. None of the 54

case studies in Table 4-2 had significant unavoidable impacts related to this impact. Impacts are generally found to be less than significant based on existing regulatory requirements and City review. As discussed below, some case study environmental clearances identified mitigation measures to address potential construction impacts, similar to impacts identified in Impact 4.14-1, above. Further discussion of the potential for specific housing types to create a significant impact follows.

- **Multi-family residential**: Multi-family residential projects may range in size from small apartment buildings with 2-10 units to larger apartment buildings and high-rise structures with hundreds of units. Large multi-family development projects would be required to abide by City standards regarding the provision, location, and design of driveways, loading areas, pedestrian and bicycle access, and curbspace management, and any plans developed would be reviewed by City staff carefully to ensure consistency prior to approval. As listed in Table 4-2, the 6220 Yucca Street Mixed-Use Project, which is located in the dense neighborhood of Hollywood and plans to provide 210 residential units in a mixed-use setting, did not substantially increase hazards due to a geometric design feature. As stated in the impact analysis for that project, "The Project's proposed uses would be consistent and compatible with the current urban uses surrounding the Project Site. No sharp curves or new intersections would be created as part of the Project… All three driveways… would be designed per LADOT standards and would obtain LADOT approval… The Project access locations would be designed to City standards so as to provide adequate sight distance, sidewalks, crosswalks, and movement controls that would meet the City's requirements to protect pedestrian and bicyclist safety[15]."

  The 8548, 8552, and 8554 N. Glenoaks Boulevard project proposed a 54-unit multifamily residential apartment building in the Sun Valley – La Tuna Canyon community plan area. The MND found the following potential impacts:

  > *A significant impact would occur if the proposed Project would substantially increase an existing hazardous design feature or introduce incompatible uses to the existing traffic pattern. The proposed Project operations will include one, two-way vehicular access driveway on N. Glenoaks Boulevard. Driveway design, as well as internal circulation and parking will be required to be designed in accordance with LADOT standards. These requirements will be addressed during the permitting process, as part of regulatory compliance implemented by DOT. During construction, including haul truck activities, the proposed Project may result in potentially significant impacts to pedestrians and passenger vehicles traveling proximate to the construction site or proposed haul routes. As a part of Regulatory Compliance Measures applicable to the proposed project, haul*

[15] City of Los Angeles, 2020. "6220 West Yucca Street Mixed Use Project." https://planning.lacity.org/eir/6220Yucca/deir/Draft%20EIR%20Sections/I.%20Introduction.pdf Accessed 2nd July 2021.

route activities will require a permit from the Board of Building and Safety Commissioners, which will include conditions, as necessary from the Department of Transportation, to address the traffic effects of proposed hauling, and manage haul trips in response to congestion. LADBS also staggers haul route schedules so that they do not occur simultaneously. However, based on the applicant's haul route application materials, proposed haul route activities would pass by Vinedale Elementary School located 10150 La Tuna Canyon Rd, and impacts may result due to construction-related activities near these areas. However, in conjunction with all applicable Regulatory Compliance Measures (RCM) and the following required mitigation, potential impacts would be reduced to less than significant levels …The MND identified several mitigation measures, including contacting the school to coordinate haul routes, haul route scheduling, and haul truck staging and signage, and pedestrian safety measures around the construction site. A review of the measures required as shown below demonstrates that they are consistent with the City's existing regulatory scheme for haul routes and construction safety requirements:

XIV-40 Public Services (Construction Activity Near Schools)

- *The developer and contractors shall maintain ongoing contact with administrator of Vinedale Elementary School. The administrative offices shall be contacted when demolition, grading and construction activity begin on the project site so that students and their parents will know when such activities are to occur. The developer shall obtain school walk and bus routes to the schools from either the administrators or from the LAUSD's Transportation Branch (323)342-1400 and guarantee that safe and convenient pedestrian and bus routes to the school be maintained.*
- *The developer shall install appropriate traffic signs around the site to ensure pedestrian and vehicle safety.*
- *There shall be no staging, idling, or parking of construction or haul truck vehicles, including vehicles to transport workers, on any of the streets adjacent to the school.*

XIV-50 Public Services (Schools affected by Haul Route)

- *LADBS shall assign specific haul route hours of operation based upon Vinedale Elementary School hours of operation.*
- *Haul route scheduling shall be sequenced to minimize conflicts with pedestrians, school buses and cars at the arrival and dismissal times of the school day. Haul route trucks shall not be routed past the school during periods when school is in session especially when students are arriving or departing from the campus.*

MMXVI-30 (Transportation - Construction)

- *The developer shall install appropriate traffic signs around the site to ensure pedestrian and vehicle safety.*

• The applicant shall be limited to no more than two trucks at any given time within the site's staging area.

• There shall be no staging of hauling trucks on any streets adjacent to the project, unless specifically approved as a condition of an approved haul route.

• No hauling shall be done before 9 a.m. or after 3 p.m.

• Trucks shall be spaced so as to discourage a convoy effect.

• On substandard hillside streets, only one hauling truck shall be allowed on the street at any time.

• A minimum of two flag persons are required. One flag person is required at the entrance to the project site and one flag person at the next intersection along the haul route.

• Truck crossing signs are required within 300 feet of the exit of the project site in each direction.

• The owner or contractor shall keep the construction area sufficiently dampened to control dust caused by grading and hauling, and at all times shall provide reasonable control of dust caused by wind.

• Loads shall be secured by trimming and watering or may be covered to prevent the spilling or blowing of the earth material.

• Trucks and loads are to be cleaned at the export site to prevent blowing dirt and spilling of loose earth.

• A log documenting the dates of hauling and the number of trips (i.e. trucks) per day shall be available on the job site at all times.

• The applicant shall identify a construction manager and provide a telephone number for any inquiries or complaints from residents regarding construction activities. The telephone number shall be posted at the site readily visible to any interested party during site preparation, grading and construction.

MM XVII-80 (Pedestrian Safety)

• Applicant shall plan construction and construction staging as to maintain pedestrian access on adjacent sidewalks throughout all construction phases. This requires the applicant to maintain adequate and safe pedestrian protection, including physical separation (including utilization of barriers such as K-Rails or scaffolding, etc) from work space and vehicular traffic and overhead protection, due to sidewalk closure or blockage, at all times.

• Temporary pedestrian facilities shall be adjacent to the project site and provide safe, accessible routes that replicate as nearly as practical the most desirable characteristics of the existing facility.

• Covered walkways shall be provided where pedestrians are exposed to potential injury from falling objects. Applicant shall keep sidewalk open during construction until only when it is absolutely required to close or block sidewalk for construction staging. Sidewalk shall be reopened as soon as reasonably feasible taking construction and construction staging into account.

Similarly, in the 9701-9707 North Vesper Avenue project (ENV No. 2016-4617-MND), in Table 4-2, involving the project for a 35 height, 36-unit mixed use building in the Mission Hills—Panorama City—North Hills Community Plan area, the MND identified the measure XVII-80 for Pedestrian Safety above to reduce impacts from construction to a less than significant level. (MND at 52-53) See also, 3440 Wilshire MND, in Table 4-2, which identified similar construction mitigation measures to the Glenoaks for a project near a school. (ENV 2016-3693 MND at B-242)

- **Single-family residential:** Single-family residential projects may range in size and scale from smaller single-family homes to larger single-family homes, and from small-lot subdivisions to multi-property single-family subdivisions. Smaller single-family developments would generally occur in residential or undeveloped areas throughout the City and would not result in significant impacts. The TAG does not require transportation assessments for development projects generating fewer than 250 vehicle trips per day. The Institute of Transportation Engineers (ITE) *Trip Generation, 10th Edition*, the industry standard for developing trip generation estimates, estimates that single-family dwelling units generate fewer than 10 daily vehicle trips (9.44). Therefore, single-family residential projects would generally not have foreseeable impacts related to hazardous design and incompatible uses. However, similar to analysis in Impact Section 4.14-1, a larger single family home housing development project or one with unique site conditions or attributes may have potential impacts.
- **ADUs:** ADUs include attached ADUs created through a building addition or conversion of existing floor area and detached ADUs of various scales. ADUs are most likely to occur within existing or proposed residential developments and would not result in significant impacts. The TAG does not require transportation assessments for development projects generating fewer than 250 vehicle trips per day. The Institute of Transportation Engineers (ITE) *Trip Generation, 10th Edition*, the industry standard for developing trip generation estimates, estimates that single-family dwelling units, to which an ADU is most similar, generate fewer than 10 daily vehicle trips (9.44). ADU projects would not foreseeably have impacts to hazardous design or incompatible uses.
- **Mixed use development:** Mixed use development could range in size and scale from neighborhood commercial mixed use with smaller nonresidential uses, to high-rise mixed-use with larger nonresidential uses. Similar to multi-family residential and large single-family residential developments, mixed use developments would likely occur in the High and Highest Resource Tracts as well as other areas of the City that permit multifamily residential use such as areas near transit and jobs. Larger mixed-use development projects would generally be located in urban areas and on infill sites. As listed in Table 4-2, the 6220 Yucca Street Mixed-Use Project, which is located in the dense neighborhood of Hollywood and plans to provide 210 residential units in a mixed-use setting, did not substantially increase hazards due to a geometric design feature. As stated in the impact analysis for

that project, "The Project's proposed uses would be consistent and compatible with the current urban uses surrounding the Project Site. No sharp curves or new intersections would be created as part of the Project… All three driveways… would be designed per LADOT standards and would obtain LADOT approval… The Project access locations would be designed to City standards so as to provide adequate sight distance, sidewalks, crosswalks, and movement controls that would meet the City's requirements to protect pedestrian and bicyclist safety[16]."

The Weingart project proposes two towers for 760 restricted affordable residential units in Downtown area of the City on two sites. The SCEA found less than significant impacts:

The Project does not include development of any new roadways or intersections. Site 1 currently has a total of three driveways (one driveway on San Pedro Street and two driveways on Crocker Street), although it appears that only the northerly driveway on Crocker Street is currently used for vehicular access. Site 2 currently has a total of three driveways (two driveways on 6th Street and one driveway on Crocker Street), although it appears that only the easterly driveway on 6th Street and the Crocker Street driveway are currently used for vehicular access.

Vehicular movements into and out of the Site 1 would be provided via a single driveway on Crocker Street, while vehicular access into and out of Site 2 would be provided via a single driveway on San Pedro Street. Descriptions of the proposed project vehicular site access driveways are provided below.

Site 1 – Crocker Street Driveway: The Site 1 driveway would be located at the northeast corner of the site along Crocker Street (i.e., along the easterly property frontage). This driveway would be located in essentially the same location as an existing site driveway that is currently inactive. One inbound lane and one outbound lane would be provided at this location with gate control equipment located such that no vehicle queuing would extend back out onto the public right-of-way. This driveway is planned to accommodate full access (i.e., left-turn and right-turn ingress and egress turning movements) for motorists accessing Site 1. The Crocker Street driveway would be constructed to City design standards.

Site 2 – San Pedro Street Driveway: The Site 2 driveway would be located at approximately 118 feet south of the East 6th Street along South San Pedro Street (i.e., along the westerly property frontage). One inbound lane and one outbound lane would be provided at this location with gate control equipment located such that no vehicle queuing would extend back out onto the public right-of-way. Based on preliminary comments

[16] City of Los Angeles, 2020. "6220 West Yucca Street Mixed Use Project." https://planning.lacity.org/eir/6220Yucca/deir/Draft%20EIR%20Sections/I.%20Introduction.pdf Accessed 2nd July 2021.

received from LADOT staff, this driveway would be restricted to right-turn ingress and egress turning movements for motorists accessing Site 2. The driveway would be constructed to City design standards.

All ingress/egress points associated with the Project would be designed and constructed in accordance with the requirements of the LADBS, the City's Department of Public Works, and LADOT. Therefore, Project impacts related to roadway hazards would be less than significant.

The 3600 Wilshire Project in the Wilshire Community Plan Area to construct 760 residential unit building and approximately 6,300 square feet of retail identified potential impacts from construction to pedestrians:

Temporary impacts to pedestrian safety could occur during construction. The Project will comply with Mitigation Measure TRAN-MM-3 to ensure the safety of pedestrians and other vehicles in general, as the construction area could create hazards of incompatible/slow-moving construction and haul vehicles. Therefore, impacts would be reduced to less than significant.

The MND identified the following mitigation measure:

TRAN-MM-3 Safety Hazards

• The developer shall install appropriate construction related traffic signs around the site to ensure pedestrian and vehicle safety.
• Applicant shall plan construction and construction staging as to maintain pedestrian access on adjacent sidewalks throughout all construction phases. This requires the applicant to maintain adequate and safe pedestrian protection, including physical separation (including utilization of barriers such as K-Rails or scaffolding) from work space and vehicular traffic, and overhead protection, due to sidewalk closure or blockage, at all times.
• Temporary pedestrian facilities shall be adjacent to the Project Site and provide safe, accessible routes that replicate as nearly as practical the most desirable characteristics of the existing facility.
• Covered walkways shall be provided where pedestrians are exposed to potential injury from falling objects.
• Applicant shall keep sidewalk open during construction until only when it is absolutely required to close or block sidewalk for construction and/or construction staging. Sidewalk shall be reopened as soon as reasonably feasible taking construction and construction staging into account. (3600 Wilshire Project, MND at B-236)

- **Conversion and/or rehabilitation:** Existing nonresidential, residential, and mixed use structures could be converted or rehabilitated for new residential uses. The conversion or rehabilitation of existing properties would not involve new construction but may result in full-time residents in structures that

were previously not occupied by residents. Converted or rehabilitated structures could contain any of the previously discussed housing typologies (with the exception of ADUs) and would be only as likely or unlikely to create significant impacts to transportation as the housing typology developed within them.

As discussed above, the majority of housing development accommodated by the Housing Element Update would generally not substantially increase hazards due to geometric design features or incompatible uses. However, larger projects or projects with unique site conditions or project attributes may have impacts during construction. Therefore, impacts related to construction activities are ***potentially significant***.

Freeway Impacts

As part of individual development project entitlements, the Interim Guidance for Freeway Safety Analysis released by LADOT in May 2020 requires that individual land use projects evaluate the potential for safety impacts related to freeway off ramp queuing. The specific concern relates to the possibility that the speed differential between vehicles traveling on freeway mainlines and vehicles queuing at freeway off-ramps may create the potential for collisions if drivers on the freeway mainline lack sufficient time to slow or stop once they are aware of a queuing situation. Generally speaking, it is anticipated that freeway mainline traffic would slow at times when high levels of off ramp queuing occurs and that the speed differential would be sufficiently small that mainline drivers would have sufficient warning about a queuing situation; however, it is possible that queuing at individual off ramps could occur at times when mainline traffic congestion is low, thus creating a potential safety issue. Because the Housing Element Update is programmatic in nature, it does not include specific development projects or details about the size, nature, or location of individual developments. In addition, future traffic levels and speeds at individual off ramps in and near the City cannot be predicted with any degree of certainty at this time because it is not known how conditions may change over the 8-year planning horizon and what measures the City and Caltrans may implement to address any off ramp queuing issues that arise. Therefore, any detailed analysis of potential future impacts related to off ramp queuing would be speculative. Nevertheless, queuing-related safety issues could potentially arise as build out of the RHNA occurs in the City, although it is anticipated that the City and Caltrans would address any such issues as they arise, it cannot be determined with certainty that queuing related safety issues would not occur. As such, safety impacts related to off ramp queuing as growth occurs pursuant to the Plan are ***potentially significant***.

Mitigation Measures

Refer to 4.14-1 (Construction Management Plan) under Impact 4.14-1.

Significance After Mitigation

Construction Related Impacts

With implementation of the Mitigation Measure 4.14-1, impacts related to construction to hazards due to geometric design features or incompatible uses would be reduced to ***less than significant with mitigation***.

Freeway Impacts

Significant and unavoidable impacts have been identified in relation to the potential for project-specific ramp queuing safety impacts as growth occurs pursuant to the Plan. Potential mitigation may include transportation demand management strategies to reduce a project's trip generation, investments to active transportation infrastructure, or transit system amenities, and/or operational changes to the ramp terminal such as lane reassignment, traffic signalization, signal phasing or timing modifications, etc. However, without specific information on where safety impacts may occur as a result of freeway off ramp queuing, it is not possible to identify appropriate mitigation measures. Therefore, no feasible mitigation can be identified for the Housing Element Update. It is anticipated that subsequent land use development projects that are seeking approval under the plan study freeway queuing and safety impacts in more detail per the Interim Guidance for Freeway Safety Analysis. Impacts related to highway safety as a result of design features or incompatible uses would be ***significant and unavoidable***.

Threshold 4.14-4	Would the Housing Element Update result in inadequate emergency access?

Impact 4.14-4 All housing development accommodated by the Housing Element Update would be reviewed by the appropriate City staff to ensure consistency with all applicable City design standards. The majority of projects would not be likely to have impacts emergency access. However, larger projects or projects with unique site conditions or attributes may result in potential impacts from construction activities. With mitigation measure MM 4.14-1 to require a construction management plan, impact would be expected to ensure the development does not result in impacts to emergency access. Impacts to emergency response times related to congestion would be less than significant based on anticipated actions by LAFD to respond to new demands. The impact is ***less than significant with mitigation***.

Impact Analysis

For individual development projects, this impact criterion considers whether a project would have adequate access to emergency services based on the road configuration and project design. At the plan level, this impact criterion may also consider the associated impacts to emergency access from any forecasted congestion.

Development Project Impacts

Any development proposal would be reviewed by the City for consistency with all City regulations, standards, and policies, including as they result to issues of emergency access. Rezoning and densification would largely occur within the community plan update process, allowing community plan areas to allocate the necessary public services in conjunction with expected growth in housing, such as location of emergency service stations and hospitals. Additionally, as most new housing would be located in high-resource areas served by public transit and providing a multimodal transportation network, it is possible that implementation of the Housing Element Update would result in increased transit ridership and active transportation, reducing the number of vehicles on the road and actually improving emergency access.

The types of housing units anticipated under the 2029 Housing Element Update would generally fall into five categories of development projects – multi-family residential development; single-family residential development; accessory dwelling units (ADU); mixed use development; and conversion and/or rehabilitation of existing nonresidential, residential and mixed-use structures to be used for housing. As stated above, all residential development projects, regardless of housing typology, would be reviewed by the City prior to development to ensure it would not result in inadequate emergency access. None of the 54 case studies reviewed for this EIR in Table 4-2 had significant unavoidable impacts related to emergency access. Some environmental clearances identified potential impacts from construction activities and identified mitigation measures that would reduce impacts to less than significant. Further discussion of the potential for specific housing types to create a significant impact follows.

- **Multi-family residential**: Multi-family residential projects may range in size from small apartment buildings with 2-10 units to larger apartment buildings and high-rise structures with hundreds of units. Large multi-family development projects would not be approved if they would result in inadequate levels of emergency access. As listed in Table 4-2, the 6220 Yucca Street Mixed-Use Project, which is located in the dense neighborhood of Hollywood and plans to provide 210 residential units in a mixed-use setting, did not result in inadequate emergency access. As stated in the impact analysis for that project, "… emergency access to the Project Site and surrounding area would continue to be provided on Yucca Street, Argyle Avenue, and Vista Del Mar Avenue similar to existing conditions…

the Project is required to provide adequate emergency access including access for LAFD [City of Los Angeles Fire Department] apparatus and personnel to the Project Site in accordance with LAFD requirements… Operational impacts regarding emergency access would be less than significant[17]."

- **Single-family residential:** Single-family residential projects may range in size and scale from smaller single-family homes to larger single-family homes, and from small-lot subdivisions to multi-property single-family subdivisions. Smaller single-family developments would generally occur in residential or undeveloped areas throughout the City and would not result in significant impacts. The TAG does not require transportation assessments for development projects generating fewer than 250 vehicle trips per day. The Institute of Transportation Engineers (ITE) *Trip Generation, 10th Edition*, the industry standard for developing trip generation estimates, estimates that single-family dwelling units generate fewer than 10 daily vehicle trips (9.44). Therefore, single-family residential projects would not generally have impacts to emergency access. However, some larger projects or projects with unique site conditions or project attributes may have impacts.

  The Hidden Creek Estates project (discussed previously) proposed a new subdivision with equestrian facilities in an unincorporated area near Porter Ranch. The project proposed to construct 188 single-family homes. The EIR found the following impacts:

  > *Construction of the project would introduce residential and recreational uses in a primarily undeveloped and natural area. Proposed development would be located in an area historically affected by wildland fires. Therefore, as part of the project, 14 locations along Browns Canyon Road would be widened to facilitate the use of Browns Canyon Road as adequate secondary emergency access for emergency and fire protection vehicles. Road widening and improvements completed along Browns Canyon would allow emergency access vehicles traveling north to pass by other vehicles traveling south along Browns Canyon Road throughout the entire length of the roadway south of the project site. Primary emergency access to the project site would be available via the extended Mason Avenue. With implementation of the project existing emergency access to both the project site and the surrounding area would be enhanced with the construction of the proposed improvements along Browns Canyon Road; therefore, the project would not result in a significant impact on emergency access to the project site.*

[17] City of Los Angeles, 2020. "6220 West Yucca Street Mixed Use Project." https://planning.lacity.org/eir/6220Yucca/deir/Draft%20EIR%20Sections/I.%20Introduction.pdf Accessed 2nd July 2021.

- **ADUs:** ADUs include attached ADUs created through a building addition or conversion of existing floor area and detached ADUs of various scales. ADUs are most likely to occur within existing or proposed residential developments and would not result in significant impacts. The TAG does not require transportation assessments for development projects generating fewer than 250 vehicle trips per day. The Institute of Transportation Engineers (ITE) *Trip Generation, 10th Edition*, the industry standard for developing trip generation estimates, estimates that single-family dwelling units, to which an ADU is most similar, generate fewer than 10 daily vehicle trips (9.44). ADU projects would not foreseeably have impacts to emergency access.
- **Mixed use development:** Mixed use development could range in size and scale from neighborhood commercial mixed use with smaller nonresidential uses, to high-rise mixed-use with larger nonresidential uses. Similar to multi-family residential and large single-family residential developments, mixed use developments would likely occur in the High and Highest Resource Tracts as well as other areas of the City that permit multifamily residential use such as areas near transit and jobs. Projects would not be approved if they would result in inadequate levels of emergency access. As listed in Table 4-2, the 6220 Yucca Street Mixed-Use Project, which is located in the dense neighborhood of Hollywood and plans to provide 210 residential units in a mixed-use setting, did not result in inadequate emergency access. As stated in the impact analysis for that project, "… emergency access to the Project Site and surrounding area would continue to be provided on Yucca Street, Argyle Avenue, and Vista Del Mar Avenue similar to existing conditions… the Project is required to provide adequate emergency access including access for LAFD [City of Los Angeles Fire Department] apparatus and personnel to the Project Site in accordance with LAFD requirements… Operational impacts regarding emergency access would be less than significant[18]."

  The Soul Project located in the Wilshire Community Plan area proposed a 222,944 square foot mixed use tower with 256 residential units and 2,507 square feet of office floor area and maximum height of 341 feet. The SCEA found the following:

  > *The Project Site is located in an established urban area that is well served by a roadway network. While it is expected that the majority of construction activities for the Project would be confined on-site, construction activities may temporarily affect access on portions of adjacent streets during certain periods of the day. However, through-access for drivers, including emergency personnel, along all roads would still be provided. In addition, in accordance with City of Los Angeles requirements, the Project would develop a Construction Management Plan (MM TRAF-1), to ensure that adequate emergency access is maintained during construction. Therefore, construction is not expected to result in inadequate emergency access. Long-term*

[18] City of Los Angeles, 2020. "6220 West Yucca Street Mixed Use Project." https://planning.lacity.org/eir/6220Yucca/deir/Draft%20EIR%20Sections/I.%20Introduction.pdf Accessed 2nd July 2021.

emergency access would continue to be provided as under existing conditions. Future driveway and building configurations would comply with applicable fire code requirements for emergency evacuation, including proper emergency exits for patrons, employees, and potential residents. Project Site access and circulation plans would be subject to review and approval by the LAFD.

With the following mitigation measure impacts from construction to emergency access were found to be less than significant:

MM TRAF-1: The Applicant shall prepare a detailed Construction Management Plan that shall include, but not be limited to, the following elements, as appropriate:

- *Requiring workers and construction trucks to generally travel outside of the peak hours;*
- *Prohibition of construction worker parking on nearby residential streets;*
- *Temporary traffic control during all construction activities encroaching on public rights-of-way to improve traffic flow and safety on public roadways;*
- *Scheduling of construction activities to reduce the effect on traffic flow on surrounding arterial streets;*
- *Safety precautions for pedestrians and bicyclists through such measures as alternate routing and protection barriers as appropriate;*
- *Scheduling of construction-related deliveries so as to generally occur outside the commuter peak hours; and*
- *Installation of appropriate traffic signs around the Project Site to ensure pedestrian, bicycle, and vehicle safety.*

The Olympic and Hill SCEA recommended the following mitigation measure to reduce potential construction impacts to emergency access to less than significant:

Mitigation Measure T-1 Compliance with LADOT Requirements: o DOT recommends that a construction work site traffic control plan be submitted to DOT for review and approval prior to the start of any construction work. The plan should show the location of any roadway or sidewalk closures, traffic detours, haul routes, hours of operation, protective devices, warning signs and access to abutting properties. DOT also recommends that construction related traffic be restricted to off-peak hours to the extent possible.

Mitigation Measure T-3 Construction Management Plan: The following will be implemented prior to construction: - As traffic lane, parking lane and/or sidewalk closures are anticipated, worksite traffic control plan(s), approved by the City of Los Angeles, should be implemented to route vehicular traffic, bicyclists, and pedestrians around any such closures. - Ensure that access will remain unobstructed for

land uses in proximity to the project site during project construction. Coordinate with the City and emergency service providers to ensure adequate access is maintained to the project site and neighboring businesses and residences.

Similarly, the Sapphire Project in the Westlake Community Plan Area which proposed 369 residential units and 22,000 square feet of ground floor retail found potential impacts from construction:

The Proposed Project is not located on or near an adopted emergency response or evacuation plan. Development of the Project Site may require temporary and/or partial street closures due to construction activities. However, any such closures would be temporary in nature and would be coordinated with the Departments of Transportation, Building and Safety, and Public Works. Mitigation measures MM K-2 through MM K-7, propose construction control measures that would minimize the Project's potential for construction impacts to less than significant levels. Furthermore, the Proposed Project would be subject to the site plan review requirements of the LAFD and the LAPD to ensure that all access roads, driveways and parking areas would remain accessible to emergency service vehicles. Therefore, the Proposed Project would not be expected to result in inadequate emergency access, and a less than significant impact would occur.

The EIR identified the following mitigation measures as reducing impacts to less than significant:

MM K-1 The Applicant shall, prior to construction, develop a Construction Traffic Control/ Management Plan (the "Plan") to be approved by LADOT to minimize the effects of construction on vehicular and pedestrian circulation and assist in the orderly flow of vehicular and pedestrian circulation in the area of the Project. The Plan shall include temporary roadway striping and signage for traffic flow as necessary, as well as the identification and signage of alternative pedestrian routes in the immediate vicinity of the Project.

MM K-2 A Construction work site traffic control plan shall be submitted to LADOT for review and approval in accordance with the LAMC prior to the start of any construction work. The plans shall show the location of any roadway or sidewalk closures, traffic detours, haul routes, hours of operation, protective devices, warning signs and access to abutting properties. All construction related traffic shall be restricted to off-peak hours (i.e., between the hours of 9:00 a.m. and 4:00 p.m.).

MM K-3 The Applicant shall install traffic signs in accordance with the LAMC around the Project Site to ensure pedestrian and vehicular safety.

MM K-4 The Applicant shall plan construction and construction staging as to maintain pedestrian access on adjacent sidewalks throughout all construction phases. This requires the applicant to maintain adequate and safe pedestrian protection, including physical separation (including utilization of barriers such as K-Rails or scaffolding, etc) from work space and vehicular traffic and overhead protection, due to sidewalk closure or blockage, at all times.

MM K-5 Temporary pedestrian facilities shall be adjacent to the project site and provide safe, accessible routes that replicate as nearly as practical the most desirable characteristics of the existing facility.

MM K-6 Covered walkways shall be provided where pedestrians are exposed to potential injury from falling objects.

MM K-7 Pursuant to LAMC Section 62.45, permits shall be obtained from the Bureau of Street Services prior to the closure of any adjacent sidewalks and/or construction of protection fences or canopies within the public right-of-way. For purposes of ensuring safe pedestrian routes are maintained during construction, the following safety measures shall be adhered to: • Applicant shall plan construction and construction staging as to maintain pedestrian access on adjacent sidewalks throughout all construction phases. This requires the applicant to maintain adequate and safe pedestrian protection, including physical separation (including utilization of barriers such as K-Rails or scaffolding, etc.) from workspace and vehicular traffic and overhead protection, due to sidewalk closure or blockage, at all times. •Temporary pedestrian facilities shall be adjacent to the project site and provide safe, accessible routes that replicate as nearly as practical the most desirable characteristics of the existing facility. •Covered walkways shall be provided where pedestrians are exposed to potential injury from falling objects. •Applicant shall keep sidewalk open during construction until only when it is absolutely required to close or block sidewalk for construction staging. Sidewalk shall be reopened as soon as reasonably feasible taking construction and construction staging into account.

- **Conversion and/or rehabilitation:** Existing nonresidential, residential, and mixed use structures could be converted or rehabilitated for new residential uses. The conversion or rehabilitation of existing properties would not involve new construction but may result in full-time residents in structures that were previously not occupied by residents. Converted or rehabilitated structures could contain any of the previously discussed housing typologies (with the exception of ADUs) and would be only as likely or unlikely to create significant impacts to transportation as the housing typology developed within them.

Based upon the above, the majority of housing development projects accommodated by the Housing Element Update would not foreseeably have impacts to emergency access. However, larger projects or

projects with unique site or project attributes may have impacts at construction. Therefore, housing development projects accommodated by the Housing Element Update impacts related to emergency access are ***potentially significant***.

Emergency Response Times

As discussed in Impact 4.14-2, the overall vehicle trips in the City will increase, even if per capita trips are reduced. As many of the City's roadways are congested, it is foreseeable that build out of the RHNA would result in additional congestion. For example, the Downtown Community Plan Draft EIR identified that the percentage of congested roadway segments (those operating at LOS E or F) will increase from 15% to 44% with anticipated growth from the Plan Update (Downtown CPU DEIR at 4.15-48). Similarly, the Hollywood Community Plan Update RDEIR identified that the percentage of congested roadway segments would increases from 37 to 43 percent with anticipated growth from the Plan Update. (Hollywood CPU RDEIR at 4.15-47)

While congestion would be anticipated to increase from build out of the RHNA, the impacts to emergency response times would not be anticipated to result in significant impacts to emergency access. The analysis from the Downtown Community Plan Update is found to be relevant and applicable to the issue for potential impacts to emergency response times from congestion resulting from build out of the RHNA. The Downtown Community Plan Update EIR found the following potential impact related to response times being affected by anticipated congestion:

> *Within the City of Los Angeles, fire prevention and suppression and emergency medical services are provided by the LAFD. Public protection service and law enforcement are provided by LAPD.*
>
> *While the Downtown Plan would impact segment-level LOS as shown above, there is not a direct relationship between predicted travel delay and response times as California state law does require drivers to yield the right-of-way to emergency vehicles and even permits emergency vehicles to use opposing lane of travel, the center turn lanes, or bus-only lanes. LAFD in collaboration with LADOT has developed a Fire Preemption System (FPS), a system that automatically turns traffic lights to green for emergency vehicles traveling on designated streets in the City. (LAFD 2008a). The City of Los Angeles has over 205 miles of routes equipped with FPS. In some instances, roadway reconfigurations with the implementation of the transportation improvements as part of the enhanced network treatments could improve emergency access. For example, a roadway reconfiguration could improve emergency access where a bus-only lane or a contiguous center left-turn lane is introduced where it did not exist. Emergency vehicles are permitted to use bus-only lanes for local access to emergency destinations. People traveling by bicycle are required to pull to the side of the road to yield access to emergency providers regardless if they are traveling in a bus- only lane or in a standard travel lane. It is more likely that when in route*

to an emergency incident, general traffic will be expected to merge into the bus-only lane, permitting the emergency vehicle to pass in the through lane to the left. Emergency responders also routinely use the center left-turn lanes, or even travel in opposing travel lanes if needed. Generally, multi-lane roadways allow the emergency vehicles to travel at higher speeds and permit other traffic to maneuver out of the path of the emergency vehicle.

Knowing exactly how fire and emergency service response times will be affected calls for a great deal of speculation. As explained above, it is not possible to exactly predict the Downtown Plan impacts at the street level. This is one factor as to why it is not possible to forecast response times. The other is that, as explained above, the relationship between emergency access and traffic and potential impacts associated with emergency access is complex and involves factors such as the following:

- *The proximity of LAFD and LAPD (and other) facilities to those they serve.*
- *The staffing and equipment at fire stations.*
- *The opportunity for emergency responders to use alternative routes in an area.*
- *The specific street configuration. LAFD, in cooperation with LADOT and LADCP, actively participates in the design of specific roadway changes in order to ensure adequate fire/emergency access is maintained. LAFD, in reviewing street and right-of-way projects, comments on particular street configuration designs, and will raise concerns if roadways present particular access challenges, and can recommend no changes be done at all or alternative changes be undertaken if fire and emergency access are particularly impacted.*
- *As identified in the Thresholds Guide (Los Angeles 2006), on any given project review, LAFD can implement project specific mitigation requirements, such as requiring fire retardant landscaping, prohibiting construction in fire hazard areas, requiring design features that reduce fire potential and developing emergency response plans.*
- *The changing demand for service is complex. For example, with increasing populations there may be more density and more construction, though new buildings are constructed in accordance with increasingly stringent building and fire codes making them safer and more resistant to fires, such as requiring fire sprinklers. The population is aging, which may increase demand for service. But it is also feasible that the population may not need additional service, as healthcare and other technologies evolve and are improved.*
- *Future factors that could increase efficiencies in response, including improvements in technology and management, such as changes in deployment of equipment and staff and mutual aid agreements.*

As discussed in Section 4.13, Public Services, LAFD has a Constitutional mandate to provide fire services as, "the protection of the public safety is the first responsibility of local government." Cal. Const. Art. XIII, Sec. 35, subd. (a)(2). LAFD "preserves life and property, promotes public safety and fosters economic growth through a commitment to prevention, preparedness, response and recovery as an all risk life safety response provider." It is the nation's second busiest provider of Emergency Medical Services (EMS); more than 85% of LAFD's daily

responses are related to EMS. The types of medical response calls received range from minor cuts to trauma and heart attacks. The call volume for structure and brush fires is less frequent.

In 2015, LAFD published a Strategic Plan 2015-2017, A Safer City, that focuses on nine goals and corresponding strategic actions that would guide the LAFD for the next three years (LAFD 2015). The primary goals that are applicable to the Project include providing exceptional public safety and emergency service and implementing and capitalizing on advanced technologies. Some of the key priorities associated with these goals include:

- *Improving response times by utilizing data and metrics to identify gaps in LAFD's response strategies and exploring response time improvements through dialogue, cognitive inquiry, innovation, and follow-up;*
- *Delivery of emergency medical services by expanding LAFD EMS response capabilities for special events and addressing periods of high vehicle traffic; and*
- *Identifying and implementing advanced technologies to support and improve performance metrics, tracking standards, data collection, analysis and reporting procedures (FireStatLA).*

The LAFD Strategic Plan also focuses on the development of an even more professional workforce, promotion of a positive work environment to address risk management issues and strengthening community relationships to improve preparedness and enhance resiliency during emergency events.

In 2018, LAFD released the new Strategic Plan 2018-2020, A Safer City 2.0, which reports that since the previous Strategic Plan was released, LAFD has hired hundreds of new firefighters, implemented the Four Bureau Reorganization, and created innovative resources such as the Advanced Provider Response Unit (APRU), the Sober Response Unit and the Fast Response Vehicle program as well as other pilot programs (LAFD 2018). The new Strategic Plan has updated goals that are more refined. The five goals are 1) Provide exceptional public safety and emergency service, 2) Embrace a healthy, safe and productive work environment, 3) Capitalize on Advanced Technology, 4) Enhance LAFD sustainability and community resiliency, and 5) Increase opportunities for personal growth and professional development. Goal 1 includes improving emergency response times, the delivery of EMS, resource deployment and readiness to respond to disasters. Goal 1 includes an objective to complete the Standards of Cover deployment analysis to determine the optimal distribution and concentration of resources and ensure a safe and effective response force for fire suppression, EMS and specialty response situations. The recommendations from the Standards of Cover are expected to be identified based on different geographic areas in the City; the Standards of Cover study was funded in the City's 2019-2020 budget and is expected to be completed within the next few years (LAFD 2019).

In the interim, LAFD has been implementing innovative resources and pilot programs especially in relation to public health. By addressing EMS related incidents with new resources, such as specialized medical units, other resources, such as fire engines and fire trucks and associated personnel, would be able to respond to other

incidents, such as fires or other emergencies. This strategy is for better resource deployment and to help reduce response times. In the Downtown Plan Area, Fire Station #4 has a Sober Response Unit, which consists of a physician's assistant or nurse practitioner working alongside a firefighter paramedic as well as a social worker. This unit can provide medical treatment in the field, such as stitches and lab work, and determine if patients can be treated in the field without being transported to a hospital, or connect patients directly to a mental health facility or sobering center (LAFD 2020).

In 2015, Planning Department staff discussed the LAFD Strategic Plan and its relationship to growth and traffic with LAFD staff in order to understand how LAFD responds to growth and changes in traffic (LAFD 2015a). LAFD advised that although increasing congestion is a factor in how they address emergency response, their ongoing planning efforts, including the LAFD Strategic Plan take into account such increases in congestion and LAFD continues to plan for and maintain public safety and emergency service as required. LAFD monitors any impact on-the-ground implementation of the Downtown Plan may have on response times and make adjustments as necessary. These adjustments may or may not include redeploying resources, adding staff or building new fire stations. In the summer of 2019, Planning Department staff met with LAFD staff on the same topic due to public comments received about congestion and emergency response (LAFD 2019a). LAFD staff indicated that there are ongoing assessments of increases in call load or types of calls throughout the City, and LAFD continuously makes resource and deployment adjustments to address these changes, such as hiring additional medical personnel, acquiring new apparatus or flex staffing of personnel during the busiest hours of the day. LAFD staff said incremental changes are currently being addressed but the pending Standards of Cover is expected to have new recommendations for the long term. The Standards would include levels of staffing of firefighters and other personnel, target response times, new facilities and apparatus needed by geography, and address a City where development is expected to become denser and taller around transit infrastructure systems.

LAFD has some adopted response times that are consistent with the response times stated in the National Fire Protection Association guidelines, including call processing, turnout for EMS and non-EMS calls, and travel. LAFD holds regular FireStat meetings to review response times throughout the City. These meetings include battalion chiefs and captains from the four Geographic Bureaus (Central, South, Valley, and West) and the Administrative Bureaus in the City, and uses the FireStat data to exercise performance management and spot trends to adjust practices, methods or identify other solutions to maintain response times. Metrics are compared between stations and even across shifts or platoons to determine if there is an issue and to continue always to work on reducing all response times to get closer to the NFPA guidelines. If response times are shown to be increasing, battalion chiefs and captains will be tasked with identifying the reason and put in place mediations to resolve the issue. For example, if it is shown that one platoon is managing a four-minute average response and another platoon at the same station in similar conditions has an average response time of four and a half minutes, the responsible officers for the station will need to determine why one platoon is doing better than another, such

as whether one platoon is taking a different route, and resolve the differences to improve the slower numbers. If the factors are external to LAFD, LAFD will coordinate with other City departments, such as LADOT or ITA to adjust street light timing, or look for completely new solutions, in order to improve response times. In general, LAFD is constantly monitoring FireStat and utilizing all available resources so that appropriate and feasible response times are being maintained.

Many members of the public focus on response times as operational measures to assess system performance (Fitch 2005) or believe that faster response times mean better patient outcome. Nationwide, the most widely referenced response time standard for advanced life support (ALS) incidents in urban settings has been for emergency responders to respond within 8 minutes and 59 seconds, when including call processing time, for 90 percent of incidents. The National Fire Protection Association 1710 Standard for the Organization and Deployment of Fire Suppression Operations, Emergency Medical Operations and Special Operations to the Public by Career Fire Departments is for an ALS unit to respond within 8 minutes to 90 percent of incidents, without including call processing time (Fitch, 2010). This response goal time has been commonly cited since Dr. Mickey Eisenberg published a study in 1979, which concluded that survival from cardiac arrest is maximized if the time between collapse to receiving CPR is four minutes and the time from collapse to receiving definitive care (e.g. defibrillation) is 8 minutes, which has led to a widespread goal of an 8- minute response for ALS units responding to life-threatening emergencies (Blanchard et al., 2012).

LAFD publishes average operational response times citywide and by specific fire stations online through FIRESTATLA (http://www.lafd.org/fsla/stations-map), and was the first fire agency in the United States to release response times to the public (Los Angeles 2019). ALS operational response times are provided for the full calendar year (January through December) starting with the year 2016; when this document was prepared in September 2019, the data available through FIRESTATLA online for 2019 was January through August. Operational response time is the time interval that starts when first contact is made (either through 911 or the fire dispatch center) and ends when the first Standard Unit arrives on-scene. A Standard Unit has the capacity or equipment to administer the full suite of lifesaving services (LAFD 2019b). Average ALS operational response times for the City and for the five stations in the Downtown Plan Area is less than the 8 minute 59 seconds standard, including call processing time. See Table 4.15-14. [Table omitted.]

From the data, the average operational response times for ALS incidents for the five fire stations in the Plan Area have generally slightly increased in recent years, but remain under the 8 minutes 59 seconds standard. Based on all of the above, it is not reasonably foreseeable that the City will not continue to stay below the 8 minutes and 59 second standard for average emergency response times in the Plan Area in consideration of the increasing congestion in the Plan Area identified above. It is reasonably foreseeable that LAFD will continue to meet its own mission statement and constitutional mandate to provide necessary fire and emergency services to the residents and visitors of the City. LAFD is currently preparing a Standards of Cover that will establish the City's response

time standard and identify the facilities, equipment and staff to maintain that response time, including in consideration of increasing congestion identified above.

Additionally, LAFD continues to develop, obtain and innovate new methods, resources and equipment to meet the needs of the City for fire and emergency response, including in the Plan Area. Based on the above, the impact of the Downtown Plan on emergency medical services and fire protection and police protection would be less than significant.

(See Downtown Community Plan DEIR at 4.15-49 to 53)

The Hollywood Community Plan Update EIR had similar findings and analysis and impact conclusion related to emergency access impacts from related to roadway congestion (see RDEIR at 4.15-52 to 60 with similar analysis).

Based upon the above analysis from the Downtown Community Plan EIR and the Hollywood Community Plan EIR, which is found applicable and relevant to the construction and operations from build out of the RHNA, impacts from the Housing Element Update to emergency response times from congestion are ***less than significant***.

Impacts from construction of housing development accommodated by the Housing Element Update is ***potentially significant***.

Mitigation Measures

Refer to 4.14-1 (Construction Management Plan) under Impact 4.14-1.

Significance After Mitigation

Imposition of Mitigation Measure 4.14-1 along with existing regulatory compliance measures will ensure impacts from housing development accommodated by the RHNA will be ***less than significant***.

4.14.7 CUMULATIVE IMPACTS

CEQA Guidelines 15130(a) require that the cumulative effect of implementing a project be assessed to determine if the project's incremental effect together with that of other projects would be cumulatively considerable. The Housing Element Update envisions full build-out of the housing accommodated by the plan by 2029, with cumulative impacts being evaluated on full implementation. Cumulative transportation and traffic impacts consider regional population, housing and employment growth projections prepared by SCAG and found in the 2016-2040 RTP as well as growth anticipated in the City of Los Angeles. The RTP also includes a Sustainable Communities Strategy (SCS) that provides guidance on land use planning and transportation to ensure that the region meets CARB's region-specific GHG reduction goals. The RTP also includes large-scale transportation improvements to show how linking transportation and land use planning can reduce automobile trips and greenhouse gas emissions. The 2016-2040 RTP/SCS identifies transportation corridors and transit routes, High Quality Transit Areas (HQTAs), and a variety of strategies to be employed across the region.

MP 2035 and SCAG 2016-2040 RTP/SCS Consistency

In August 2015, the City of Los Angeles adopted MP 2035. MP 2035 (formerly the Transportation Element of the City's General Plan) is the transportation blueprint for the City of Los Angeles. MP 2035 identifies a number of changes to the City's circulation system, including policies, an Enhanced Complete Street System, an Action Plan, a Complete Streets Design Guide, and a revised Bicycle Plan, all of which will influence the network conditions in the City of Los Angeles.

MP 2035 provides the framework for future community plans and specific plans, which take a closer look at the transportation system in specific areas of the City and recommend more detailed implementation strategies to realize MP 2035. MP 2035 was prepared in compliance with the 2008 Complete Streets Act, which mandates that the circulation element of a city's General Plan be modified to plan for a balanced, multimodal transportation network that meets the needs of all users of streets, roads, and highways, defined to include motorists, pedestrians, bicyclists, children, persons with disabilities, seniors, movers of commercial goods, and users of public transportation, in a manner that is suitable to the rural, suburban, or urban context of the general plan.

The Housing Element Update does not propose any specific development projects. This cumulative impacts analysis evaluates the impacts of the Housing Element Update in conjunction with the MP 2035 network changes assumed to be implemented by 2029. No provision of the Housing Element Update would conflict with the goals and policies of the MP 2035 or SCAG 2020-2045 RTP/SCS. The Housing Element

Update would not have a cumulatively considerable impact related to MP 2035 or SCAG 2020-2045 RTP/SCS consistency. Cumulative impacts are ***less than significant***.

CEQA Guidelines Section 15064.3, Subdivision (b) Consistency

The Housing Element Update meets the City-adopted threshold of not exceeding baseline conditions, and therefore does not create a transportation impact itself. While the Housing Element Update cannot be used to determine the impact of individual development projects or community plans, the inclusion of the regionally used future forecasts accounts for potential cumulative impacts in this analysis.

A project that falls below an efficiency-based threshold that is aligned with long-term environmental goals and relevant plans would have no cumulative impact distinct from the project impact. Accordingly, a finding of a less-than-significant impact for a project would also be a less than significant cumulative impact. Additionally, long-term VMT trends identified by both the City of Los Angeles TDF model and the SCAG TDF model indicate that VMT will go down throughout the SCAG region in the coming years and decades due to increasing population and job density, infill development, and greater active transportation and transit usage.

As noted above, the Housing Element Update is not projected to have significant impact to VMT. Given that the City of Los Angeles is already highly urbanized, and full build-out of the housing development accommodated under the Housing Element would result in increased infill development and densification, the Update is consistent with the applicable goals and objectives of the SCAG 2016-2040 RTP/SCS and Mobility Plan 2035 to locate developments in infill locations served by quality public transportation and facilitating active transportation. Therefore, the Housing Element Update's cumulative impact to VMT would be ***less than significant***.

Hazards Due to a Geometric Design Feature or Incompatible Uses

The Housing Element Update does not include any elements that would promote sharp curves, dangerous intersections, or incompatible uses that could present safety hazards, and promotes policies and programs to encourage safety of users across all modes. Although the Housing Element Update describes a reasonably expected future and cannot constitute a commitment to any project-specific development, individual projects would be expected to align with existing (and any future) adopted City safety principles. However, queuing-related safety issues concerning the potential for safety impacts related to freeway off ramp queuing could potentially arise as additional development occurs throughout the City and elsewhere in the region. The specific concern relates to the possibility that the speed differential between vehicles traveling on freeway mainlines and vehicles queuing at freeway off-ramps may create the potential for collisions if drivers on the freeway mainline lack sufficient time to slow or stop once they

are aware of a queuing situation. Although it is anticipated that the City and Caltrans would address any such issues as they arise, it cannot be determined with certainty that queuing-related safety issues would not occur. Thus, cumulative impacts related to freeway off ramp queuing are considered significant and unavoidable and the accommodation of the housing allowed under the Housing Element Update may make a cumulatively considerable contribution to freeway safety impacts.

Cumulative impacts related to queuing-related safety issues are ***significant and unavoidable.*** All other cumulative impacts related to transportation hazards are ***less than significant.***

Emergency Access

The Housing Element Update would increase traffic throughout the City of Los Angeles, which could result in potential delays for emergency vehicles. However, while the MP 2035 includes proposed roadway changes, they do not provide intersection-level detail citywide. It is feasible that some of these improvements to the network would provide benefits to emergency access as well. As noted above, the Department of City Planning staff have discussed the LAFD Strategic Plan and its relationship to growth and traffic with LAFD staff. While LAFD acknowledged the possible effects of congestion on their efforts, their ongoing planning efforts and new Strategic Plan consider increased congestion and the possible adjustments necessary. These adjustments may include redeploying resources, adding staff, or building new fire stations as deemed necessary. LAFD will continue to monitor growth in the City of Los Angeles and any impact they identify will be addressed when needed. Therefore, the Housing Element Update would not have a cumulatively considerable impacts related to emergency access. Cumulative impacts are ***less than significant.***

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4.15 TRIBAL CULTURAL RESOURCES

This section describes the potential for projects under the Housing Element Update to directly or indirectly impact tribal cultural resources. The analysis in this section was informed on the results of consultation with California Native American Tribes conducted by the City for the project, as required by CEQA as amended by Assembly Bill (AB) 52. The Native American consultation documentation is provided in Appendix H of this EIR. Impacts from the Safety Element Update to tribal cultural resources were found to be less than significant in the Initial Study (see Appendix A) and are not discussed in this EIR.

4.15.1 ENVIRONMENTAL SETTING

Existing Conditions

As discussed in Section 4.4, *Cultural Resources*, Los Angeles is in an area traditionally occupied by the Native American group known as the Gabrieleño. The name Gabrieleño was applied by the Spanish to those natives that were attached to Mission San Gabriel. Today, most contemporary Gabrieleño prefer to identify themselves as Tongva. Tongva territory included the Los Angeles basin and southern Channel Islands as well as the coast from Aliso Creek in the south to Topanga Creek in the north. The Tongva language belongs to the Takic branch of the Uto-Aztecan language family, which can be traced to the Great Basin region.

The Tongva established large permanent villages and smaller satellite camps throughout their territory. Society was organized along patrilineal non-localized clans, a common Takic pattern. Tongva subsistence was oriented around acorns and supplemented by roots, leaves, seeds, and fruits of a wide variety of plants. Meat sources included large and small mammals, freshwater and saltwater fish, shellfish, birds, reptiles, and insects. Tongva employed a wide variety of tools and implements to gather and hunt food. The digging stick, the bow and arrow, traps, nets, blinds, throwing sticks and slings, spears, harpoons, and hooks were common tools. Like the Chumash, the Tongva made oceangoing plank canoes (known as ti'at) capable of holding 6 to 14 people and used for fishing, travel, and trade between the mainland and the Channel Islands.

Cultural deposits (e.g., archaeological resources) associated with the Tongva may be found buried deeply in alluvial soils, which occur throughout the Los Angeles Basin. As detailed in the Southern California Flower Market Project EIR, which is discussed further in the impact analysis below, cultural resources are most likely to be encountered in alluvial deposits associated with low-energy depositional events:

> *It has been demonstrated elsewhere in the downtown portion of Los Angeles that deeply buried archaeological deposits can exist within alluvium below Historic-period disturbances and may also be intermixed with Historic-period debris. Alluvial deposits within the Los Angeles Basin can be massive, extending hundreds of feet below*

the surface, and may contain sediments deposited before human occupation of North America. Furthermore, most accumulations of alluvial sediments were formed by a combination of high- and low-energy depositional events. High-energy events are less likely to have preserved any material remains left on the surface by Native Americans, while low-energy floods tend to produce more favorable environments for the preservation of cultural materials. Thus, low-energy alluvial sediments dating to the Late Pleistocene or Holocene time-periods have the greatest potential for preserving tribal cultural resources. There is no absolute measure of depth below the surface in which sediments with these properties occur and site-specific conditions must be considered. Also, such soil conditions are an indicator of a setting favorable for preservation, but the presence of soils with these properties is not an absolute indicator of tribal cultural resources presence.

Sediment profiles compiled from geotechnical bores taken from within the (California Flower Market) Project Site described the uppermost soil stratum as artificial fill, between 2 and 6 feet. Historic brick and glass fragments were observed in this upper layer, likely due to the historic development of the Project Site, which lies above natural strata of Holocene-age alluvium. The alluvial sediments are composed of lenses of gravel, sand, silt, and clay derived from the Elysian and Repetto Hills to the north and the Los Angeles River to the east. The deposition is consistent with general trends for the Los Angeles Basin and those specifically within the floodplain of the Los Angeles River. The sediment profiles suggest higher-energy depositional zones beginning between 25 and 35 feet below the surface, with the deeper and coarser deposits occurring on the east portion of the Project Site. Between 5 and 25 feet below the surface the depositional trends suggest generally lower-energy events that have favorable conditions for preserving buried tribal cultural resources. Subtle variations may exist within this stratum that were not defined by the geotechnical study and could have relevance for tribal cultural resource preservation potential.

Native American Consultation/Sacred Lands Files

The City of Los Angeles requested an AB 52 list from the Native American Heritage Commission (NAHC) and mailed AB 52 notification letters to each tribe listed on November 12, 2020. Two responses were received within the 30-day consultation window.

The Fernandeño Tataviam Band of Mission Indians requested consultation with the City. The initial consultation meeting was held on December 1, 2020 and ongoing consultation followed. During the December 1, 2020 meeting, the tribal representative asked questions about the scope of the project, and requested information regarding future CEQA streamlining measures that may be included as part of the Proposed Project. At the conclusion of the meeting, the tribal representative requested that consultation remain open, that they be provided opportunity to provide recommended mitigation measures for inclusion in the EIR, and that they be provided an opportunity to review a draft of the EIR sections relating to tribal cultural resources and cultural resources analyses. On December 15, 2020, the tribal representative

provided via email correspondence a list of standard conditions and mitigation measures to be addressed and included within the Cultural Resources and Tribal Cultural Resources sections of the EIR. On June 25, 2021, the tribal representative sent email correspondence indicating that they would like to conclude the consultation process.

The Gabrieleno Band of Mission Indians also provided a response; however, after it was confirmed that the proposed Housing Element Update does not directly entail ground disturbance, no consultation was requested. No other tribes requested consultation. Documentation of tribal consultation completed for the Proposed Project is included as Appendix H.

Neither a Sacred Lands File (SLF) request nor a California Historical Resource Information System (CHRIS) records search were completed for the entire City of Los Angeles. However, tribal cultural resources have been found in the City and may occur, as discussed above, throughout many areas of the City. For example, the Hollywood Community Plan Update EIR identified significant archaeological resources and tribal cultural resources located in the City, including a Gabrielino Indian site in Griffith Park. Additionally, as a result of the SLF request that was completed for the Downtown Community Plan Update EIR, the Gabrielino Band of Mission Indians – Kizh Nation provided positive results. While the location of the resource was not specified, the results likely refer to the approximate location of Yangna, an ethnographic village site thought to be located near the present-day location of Los Angeles Union Station. In another example, a records search of the South Central Coastal Information Center conducted as part of the Exposition Corridor Transit Neighborhood Plan (ECTNP) EIR identified one archaeological site within the ECTNP Area and seven additional sites and one isolate within a half-mile radius of the ECTNP area, which is located in the Palms - Mar Vista - Del Rey Community Plan Area. CEQA and other state laws protect the location of tribal cultural resources. The City does not have or maintain maps of all known tribal cultural resources or locations likely to contain tribal cultural resources. The Framework Element does include a distribution of known historic (which could include tribal cultural resources) and prehistoric cultural resources which is provided below in Figure 4.15-1.

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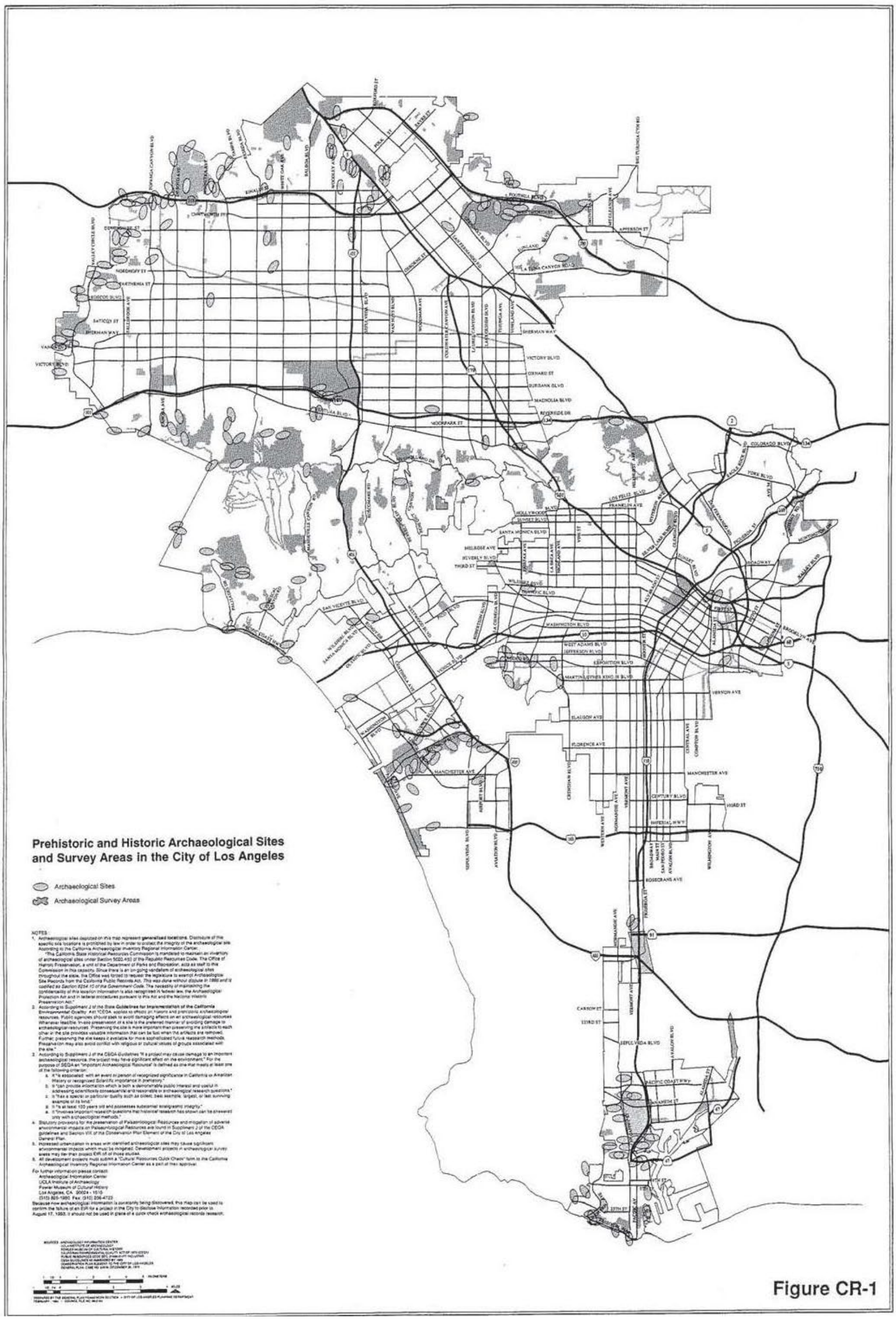
Figure 4.15-1 Prehistoric and Historic Archaeological Sites and Survey Areas in Los Angeles



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4.15.2 REGULATORY FRAMEWORK

The following describes the primary regulatory requirements regarding tribal cultural resources. Applicable plans and regulatory documents/requirements include the following:

- Assembly Bill (AB) 52
- The California Public Resources Code (PRC) Section 5097
- The California Penal Code

State

Assembly Bill 52

AB 52 was approved on September 25, 2014. The act amended California Public Resources Code (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.[1] Tribes interested in consultation must respond in writing within 30 days from

[1] *PRC, Sections 21080.3.1(b) and (c).*

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.[2]

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]

In addition to other CEQA provisions, the lead agency may certify an EIR or adopt a MND for a project with a significant impact on an identified tribal cultural resource, only if a California Native American tribe has requested consultation pursuant to Section 21080.3.1 and has failed to provide comments to the lead agency, or requested a consultation but failed to engage in the consultation process, or the consultation process occurred and was concluded as described above, or if the California Native American tribe did not request consultation within 30 days.[4]

PRC Section 21082.3(c)(1) states that any information, including, but not limited to, the location, description, and use of the tribal cultural resources, that is submitted by a California Native American tribe during the environmental review process shall not be included in the environmental document or otherwise disclosed by the lead agency or any other public agency to the public without the prior consent of the tribe that provided the information. If the lead agency publishes any information submitted by a California Native American tribe during the consultation or environmental review process, that information shall be published in a confidential appendix to the environmental document unless the tribe that provided the information consents, in writing, to the disclosure of some or all of the information to the public.

Confidentiality does not apply to data or information that are, or become publicly available, are already in lawful possession of the project applicant before the provision of the information by the California Native American tribe, are independently developed by the Project applicant or the Project applicant's agents, or are lawfully obtained by the Project applicant from a third party that is not the lead agency, a California Native American tribe, or another public agency.[5]

[2] *PRC, Sections 21080.3.1(d) and 21080.3.1(e)*
[3] *PRC, Section 21080.3.2(b)*
[4] *PRC, Sections 21082.3(d)(2) and (3).*
[5] *PRC, Section 21082.3(c)(2)(B).*

California Public Resources Code

California PRC Section 5097.98, as amended by AB 2641, provides procedures in the event human remains of Native American origin are discovered during project implementation. PRC Section 5097.98 requires that no further disturbances occur in the immediate vicinity of the discovery, that the discovery is adequately protected according to generally accepted cultural and archaeological standards, and that further activities take into account the possibility of multiple burials. PRC Section 5097.98 further requires the NAHC, upon notification by a County Coroner, designate and notify a Most Likely Descendant (MLD) regarding the discovery of Native American human remains. Once the MLD has been granted access to the site by the landowner and inspected the discovery, the MLD then has 48 hours to provide recommendations to the landowner for the treatment of the human remains and any associated grave goods. In the event that no descendant is identified, or the descendant fails to make a recommendation for disposition, or if the land owner rejects the recommendation of the descendant, the landowner may, with appropriate dignity, reinter the remains and burial items on the property in a location that will not be subject to further disturbance.

PRC Section 5097.99 prohibits acquisition or possession of Native American artifacts or human remains taken from a Native American grave or cairn after January 1, 1984, except in accordance with an agreement reached with the Native American Heritage Commission.

PRC Section 5097.5 provides protection for tribal resources on public lands, where Section 5097.5(a) states, in part, that:

> *A person shall not knowingly and willfully excavate upon, or remove, destroy, injure, or deface, any historic or prehistoric ruins, burial grounds, archaeological or vertebrate paleontological site, including fossilized footprints, inscriptions made by human agency, rock art, or any other archaeological, paleontological or historical feature, situated on public lands, except with the express permission of the public agency having jurisdiction over the lands.*

California Penal Code

California Penal Code Section 622½ provides the following: "Every person, not the owner thereof, who willfully injures, disfigures, defaces, or destroys any object or thing of archeological or historical interest or value, whether situated on private lands or within any public park or place, is guilty of a misdemeanor."

California Penal Code Section 623 provides the following: "Except as otherwise provided in Section 599c, any person who, without the prior written permission of the owner of a cave, intentionally and knowingly does any of the following acts is guilty of a misdemeanor punishable by imprisonment in the county jail

not exceeding one year, or by a fine not exceeding one thousand dollars ($1,000), or by both such fine and imprisonment: (1) breaks, breaks off, cracks, carves upon, paints, writes or otherwise marks upon or in any manner destroys, mutilates, injures, defaces, mars, or harms any natural material found in any cave; (2) disturbs or alters any archaeological evidence of prior occupation in any cave; (3) kills, harms, or removes any animal or plant life found in any cave; (4) burns any material which produces any smoke or gas which is harmful to any plant or animal found in any cave; (5) removes any material found in any cave; (6) breaks, forces, tampers with, removes or otherwise disturbs any lock, gate, door, or any other structure or obstruction designed to prevent entrance to any cave, whether or not entrance is gained.

4.15.3 ENVIRONMENTAL IMPACTS

Thresholds of Significance

The following thresholds of significance are based on Appendix G of the CEQA Guidelines. The Housing Element Update would have a significant impact to tribal cultural resources if it would:

- **Threshold 4.11-1:** 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:
    - 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
    - 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 Resource Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.

Methodology

The analysis of tribal cultural resources considers the presence of known tribal cultural resources, as well as the potential for significant tribal cultural resources to occur in the City through the review of records and case studies. The analysis also considers information received through the Native American AB 52 consultations.

Project Impacts and Mitigation Measure

Threshold 4.15-1	Would the Housing Element Update 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: • 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 • 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 Resource Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe?

Impact 4.15-1 Housing development accommodated under the Housing Element Update would involve ground disturbance during construction that would have the potential to disturb as yet undiscovered tribal cultural resources. Mitigation Measures could reduce impacts from anticipated development from the Housing Element Update to less than significant. However, it is not feasible to impose the mitigation measures on all future projects and even with mitigation measures, significant impacts may still occur based on unusual circumstances. Therefore, impacts due to housing development accommodated under the Housing Element would be ***significant and unavoidable***.

As described in the *Environmental Setting* in Section 4.4, *Cultural Resources*, Los Angeles has a long history of Native American habitation. Although archaeological resources do not automatically qualify as tribal cultural resources, such resources may qualify after evaluation of the resource(s) significance. In general, areas where water sources are or were present and around mountains are locations where tribal cultural resources could be present, such as the Los Angeles River and Verdugo Mountains. Grading and excavation associated with housing development accommodated by the Housing Element Update, that disturb previously undisturbed soils, have the potential to significantly impact tribal cultural resources.

The types of housing units anticipated under the Housing Element Update would generally fall into five categories of development projects, each of which is addressed below with respect to its potential to impact tribal cultural resources. Table 4-2 in Section 4, *Environmental Analysis*, provides an overview of 54 previous housing projects and their associated environmental impacts. As shown therein, no projects were found to have significant and unavoidable impacts relating to tribal cultural resources. Nine projects were found to have less than significant impacts after incorporation of mitigation measures, and all other projects were found to have less than significant impacts to tribal cultural resources.

The types of housing units anticipated under the Housing Element Update include multi-family residential development; single-family residential development; Accessory Dwelling Units (ADU); mixed use development; and conversion and/or rehabilitation of existing nonresidential, residential and mixed-use structures to be used for housing. The potential to cause ground disturbance would vary according to project type. In areas where there are high levels of previous disturbance, the potential to encounter tribal cultural resources is generally low, and the potential to encounter resources would be highest in previously undisturbed areas, particularly near water resources, or where redevelopment of a site involves deeper excavation than that which has previously occurred at the site. Further discussion of the potential impacts of these project types follows.

- **Multi-family residential:** Multi-family residential projects may range in size from small apartment buildings with two to ten units to larger apartment buildings and high-rise structures with hundreds of units. Because new construction would be required, multi-family developments of any size would cause ground disturbance. Large multi-family development projects may have the potential to result in more substantial impacts due to their greater footprint and because such features as subsurface parking structures would cause a greater depth of disturbance. However, some types of multi-family developments, such as permanent supportive housing and affordable housing, may result in different impacts, because parking requirements could be reduced to require only surface parking, rather than subterranean, for example. The analysis of tribal cultural resource impacts in the Thatcher Yard project listed in-Table 4-2 of Section 4 of this EIR, is consistent with tribal cultural resource impact analysis for multi-family development projects in the City. The Thatcher Yard project in the Venice Community Plan Area was a 98-unit residential development that consisted of one three-story multi-family residential structure with one subterranean parking level and nine two-story multi-family residential structures. Grading and extensive excavation for subterranean parking were found to potentially impact tribal cultural resources.

  In analyzing the impacts to tribal cultural resources, the SCEA found the following for construction and cumulative impacts:

Construction Impacts

As discussed in response to Checklist Question 5, Cultural Resources, the Project Site and immediately surrounding areas are within proximity of an area of known archaeological sites or archaeological survey areas. Additionally, a Sacred Lands File search conducted by the Native American Heritage Commission (NAHC) in May 2019, on behalf of the Project yielded positive results. Although the Project Site is located in a highly urbanized area of the Venice Community Plan Area of the City of Los Angeles, and has been disturbed by past development activities, the Project includes subgrade preparation that would involve the excavation and export of approximately 4,800 cubic yards of soil. Thus, the potential exists for the unanticipated discovery of archaeological materials. Because the presence or absence of such materials cannot be determined until the site is excavated, a Tribal Cultural Resources report (TCR Report) has been prepared for the Project. On July 17, 2019, SWCA conducted a confidential search of the CHRIS records at the South Central Coastal Information Center (SCCIC) on the campus of California State University, Fullerton. The CHRIS records search did not identify any known tribal cultural resources in the Project site. However, several lines of evidence, including the Sacred Lands File search, indicate that the potential exists for unrecorded tribal cultural resources in the form of buried features or artifacts, as well as Native American burials in the Project area. The likelihood of tribal cultural resource presence within the Project Site was mapped as areas of high, moderate, and low sensitivity. The sensitivity assessment considered Native American settlement patterns within the Ballona area, proximity to closest known sites, and historical impacts to the physical setting. The sensitivity for tribal cultural resources is highest along the southernmost portion of the Project site and within naturally occurring alluvial sediments found below deposits of artificial fill, which otherwise characterize large portions of the Project Site. The potential for impacts to tribal cultural resources exists only in those places where the Project activities are likely to encounter alluvial sediments. Conversely, where proposed ground disturbances are proposed exclusively within artificial fill, any tribal cultural resources that might be present in the underlying alluvium would remain preserved, and Project-related impacts would be avoided.

The Project would require removal of all paved surfaces within the Project site and excavation for a basement level. Excavation for the basement level is expected to extend four feet below grade within a 32,925-square-foot area (0.76 acre) measuring approximately 458 by 72 feet. The footprint of the basement level includes areas mapped as low, moderate, and high sensitivity for tribal cultural resources. The high and moderate areas are the most likely to contain underlying alluvial sediments in which tribal cultural resources could occur. Excavation within the low sensitivity zone is expected only occur within artificial fill. Within the remainder of the Project Site, the pavement removal is only expected to result in disturbances to the near surface, which appears to be primarily characterized by artificial fill. Because there is a potential for

previously unknown cultural resources to be present in the Project area, mitigation measures MM TCR-1 through TCR-4 are required.

The Project would also be required to follow procedures detailed in California Public Resources Code Section 21083.2. The required mitigation and regulatory compliance would ensure any found deposits are treated in accordance with federal, State, and local guidelines, including those set forth in PRC Section 21083.2. As discussed in Section IV., RTP/SCS Program EIR Mitigation Measures, the Project incorporates by reference and is consistent with SCAG 2016-2040 RTP/SCS Mitigation Measure MM RTP/SCS-CUL-2(b). Compliance with regulatory requirements and with the Project-specific mitigation measure fulfils the RTP/SCS mitigation measure and goes beyond the scope of MM RTP/SCS-CUL-2(b).

Cumulative Impacts

The focus of this cumulative impacts analysis is on the combined impact of the Project and the related projects with respect to the topics listed in the TCRs analysis above. The cumulative impacts study area for TCRs is the extent of the related projects. As discussed above, the Project Site is within proximity of an area of known archaeological sites or archaeological survey areas. Additionally, a Sacred Lands File search conducted by the Native American Heritage Commission (NAHC) in May 2019, on behalf of the Project resulted in positive results. However, the nearest related project to the Project Site is related project LA10, which consists of 65 multi-family residential units at 13488 W. Maxella Avenue (see Figure II-12 in Section II, Project Description, of this document). This related project would be approximately 0.28 miles east of the proposed Project. It is unknown whether related project LA10 or any other related project contains identified sites, features, places, or cultural landscapes that have been 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. However, the Project is required to implement mitigation measure MM TCR-1 and all applicable regulatory requirements to mitigate the potential for TCRs to be disturbed by the Project. It is unlikely, because of the distance between the Project and the related projects, and any resources would be shared amongst the sites. However, any related project sites that would be required to comply with PRC Section 21074 governing TCRs. As the Project would fully mitigate any potential impact to TCRs through implementation of mitigation measure MM TCR-1 and all applicable regulatory requirements, cumulative impacts would not be considerable and impacts would be less than significant.

Measures to reduce potential impacts to tribal cultural resources were adopted as part of the Thatcher Yard Project through the SCEA approval process, including, formulation and execution of a plan to test the project site for the presence of buried cultural resources was required. Resources uncovered during testing were required to be documented and their significance evaluated. If a qualified archaeologist determined a resource uncovered at the project site to be significant pursuant to CEQA and avoidance was not possible,

a data recovery program or other means of reducing impacts were to be implemented. Additionally, prior to construction, a qualified archaeologist was to inform construction personnel about the types of resources that could be encountered, procedures to follow in the event of a discovery, and potential penalties for failing to adhere to applicable laws and regulations. In the event that an unanticipated discovery of tribal cultural resources was made during construction, work was to be suspended or diverted to allow a qualified archaeologist to evaluate the significance of the find. In the event that human remains were unearthed ground disturbing activities were to be suspended or redirected, the county coroner be notified, and, if the coroner determined the remains to be of Native American origin, the county coroner was to notify NAHC, which would designate and notify a Native American MLD to provide recommendations to the landowner as to the disposition of the remains. After imposition of the mitigation measure through the SCEA process, the impacts to cultural resources (including tribal cultural resources) for the Thatcher Yard project were found to be less than significant.

- **Single-family residential:** Single-family residential projects may range in size and scale from smaller single-family homes to larger single-family homes, and from small-lot subdivisions to multi-property single-family subdivisions. Single-family developments of any size would cause ground disturbance. However, large single-family development projects, such as residential subdivisions, may have the potential to result in more substantial impacts due to their greater footprint and depth of ground disturbance, particularly when they involve development of previously undisturbed lands. The analysis of tribal cultural resource impacts in the 11070 North Borden Avenue Residential Project, in Table 4-2, is consistent with tribal cultural resource impact analysis for multi-family development projects in the City. The 11070 North Borden Avenue Residential Project in the Central City CPA was a single-family residential development that consisted of the subdivision of one lot into ten smaller lots, a zone change for nine of the new lots, and the development of nine single family dwellings.

  In analyzing the impacts to tribal cultural resources, the MND found the following for construction and cumulative impacts:

  > *Less than Significant Impact. A significant impact would occur if the project would 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, which is 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). The site is not 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(l). Therefore, impacts would be less than significant. (11070 North Borden Avenue Residential Project 47)*

[…]

Less than Significant with Mitigation Incorporated. Approved by Governor Brown on September 25, 2014, Assembly Bill 52 (AB52) establishes a formal consultation process for California Native American Tribes to identify potential significant impacts to Tribal Cultural Resources (TCRs), as defined in Public Resources Code Section 21074, as part of CEQA. Effective July 1, 2015, AB 52 applies to projects that file a Notice of Preparation on or after July 1, 2015. PRC Section 21084.2 now establishes that a project with an effect that may cause a substantial adverse change in the significance of a TCR is a project that may have a significant effect on the environment. To help determine whether a project may have such an effect, PRC Section 21080.3.1 requires a lead agency to consult with any California Native American tribe that requests consultation and is traditionally and culturally affiliated with the geographic area of a proposed project. That consultation must take place prior to the release of a negative declaration, mitigated negative declaration, or environmental impact report for a project. As a result of AB 52, the following must take place: 1) prescribed notification and response timelines; 2) consultation on alternatives, resource identification, significance determinations, impact evaluation, and mitigation measures; and 3) documentation of all consultation efforts to support CEQA findings for the administrative record. Under AB 52, if a lead agency determines that a project may cause a substantial adverse change to a TCR, the lead agency must consider measures to mitigate that impact. PRC Section 21074 provides a definition of a TCR. In brief, in order to be considered a TCR, a resource must be either: 1) listed, or determined to be eligible for listing, on the national, State, or local register of historic resources, or 2) a resource that the lead agency chooses, in its discretion supported by substantial evidence, to treat as a TCR. In the latter instance, the lead agency must determine that the resource meets the criteria for listing in the State register of historic resources or City Designated Cultural Resource. In applying those criteria, a lead agency shall consider the value of the resource to the tribe. As specified in AB 52, lead agencies must provide notice to tribes that are traditionally and culturally affiliated with the geographic area of a proposed project if the tribe has submitted a written request to be notified. The tribe must respond to the lead agency within 30 days of receipt of the notification if it wishes to engage in consultation on the project, and the lead agency must begin the consultation process within 30 days of receiving the request for consultation. In compliance with AB 52, the City provided notice to tribes soliciting requests for consultation on August 25, 2020. On September 10, 2020, response was received from the FTBMI which indicated that the project is located within the traditional FTBMI ancestral territory and, therefore, is of interest to the tribe. On September 28, 2020, a record search of the Native American Heritage Commission (NAHC) Sacred Lands Files Search was completed for the project site upon the request of the FTBMI, and the results were negative.

Subsequently, the FTBMI requested a consultation which was held on October 14, 2020. The FTBMI representative explained that a known tribal cultural resource site exists between 0.25 and 0.5 miles of the

project site near the Hansen Dam region. While the City's existing RCMs address the inadvertent discovery of tribal cultural resources for all projects, there is a high possibility of tribal remains or artifacts that may be found on the site that should be consulted with not only an archeologist, but also the Native American tribes upon discovery. As a result, FTBMI requested to be notified if and when cultural resources are encountered during ground-disturbing activities to assure that all cultural materials on the surface and subsurface (if any) and any inadvertent discovery are properly documented, salvaged, and protected. Therefore, with the implementation of Mitigation Measures TCR-1 through TRC-3, impacts related to tribal and cultural resources will be less than significant. (11070 North Borden Avenue Residential Project MND 48-49)

To reduce impacts, the project, through mitigation measures imposed through the MND process, was to implement the following measures: that, in the event that or tribal cultural resources were unearthed, ground-disturbing activities were to be suspended or redirected while a qualified archaeological monitor remove or record any artifacts; that the lead agency or project applicant was to consult with the appropriate tribal government concerning any tribal cultural resources unearthed during construction; and that, in the event that human remains were unearthed, ground disturbing activities were to be suspended or redirected, the county coroner be notified, and, if the coroner determined the remains to be of Native American origin, the lead agency and consulting tribes were to be notified immediately. With implementation of the mitigation measures the project was found to have less than significant impacts to tribal cultural resources.

- **ADUs:** ADUs include attached ADUs created through a building addition or conversion of existing floor area and detached ADUs of various scales. Development of ADUs involving the conversion of existing floor area would be unlikely to cause ground disturbance and would not be likely to impact archaeological resources. The development of an ADU involving new construction would cause ground disturbance but would be less likely than other development types to involve impacts to a tribal cultural resource due to their comparatively small footprint and depth of ground disturbance.
- **Mixed use development:** Mixed use development could range in size and scale from neighborhood commercial mixed use with smaller nonresidential uses, to high-rise mixed-use with larger nonresidential uses. Mixed use developments of any size would cause ground disturbance. However, large-scale mixed use development projects may have greater potential to result in substantial impacts to a tribal cultural resource due to their potential to have a greater footprint and depth of ground disturbance, including through the construction of under-ground parking structures. The analysis of tribal cultural resource impacts in the Southern California Flower Market mixed-use project, in Table 4-2, is consistent with tribal cultural resource impact analysis for multi-family development projects in the City. The Southern California Flower Market project in the Central City CPA was a mixed-use

development that consisted of 12-story residential tower over three stories of office, retail, restaurant, wholesale flower market, and one level of subterranean parking.

In analyzing the impacts to tribal cultural resources, the EIR found the following for construction and cumulative impacts:

Construction Impacts

The Project Site is west of the Los Angeles River, currently located approximately 1.1 miles to the east of the Project Site, though within the rivers historical floodplain. Shifts in the main channel of the Los Angeles River have occurred numerous times in recorded history, including two significant shifts in 1815 and 1825, the former of which realigned the channel to the approximate location of the Project Site. The general proximity of the Project Site to areas of known habitation, the river, and broad travel corridors has the effect of an overall increase in the sensitivity for unknown tribal cultural resources, at least higher than low background levels, particularly for the archaeological remains of temporary open camps. Such camps are typically identified by the presence of hearth features, ground stone and other types of artifact assemblages. However, additional factors related to preservation of such materials are considered with respect to alluvial depositional settings within the Los Angeles River floodplain and are discussed below.

The Gabrielino village known as Yaanga is the closest ethnographically documented Native American community to the Project Site. Yaanga is estimated to have been located in the area between the Los Angeles plaza and present-day Union Station, approximately 1.3 miles north- northwest of the Project Site. Archival research identified the site of a rancheria populated by Island Gabrielino, i.e., from San Nicolas Island, also referred to as Nicoleño. The site was known as Rancheria de los Pipimares (Island Indian village) and is estimated to have been near the Project Site, between 7th and 8th Streets, west of San Pedro Street. The origins of kotuumot kehaay (mourning ceremony) predate the Mission period (1769 -1834) by at least 2,000 years; it was reportedly practiced in mid-nineteenth century Gabrieleno communities near the San Gabriel Mission, San Fernando, Piru, and Saticoy, and in neighboring Luiseño- and Cahuilla- speaking regions.

The Project Site is on the south-central portion of the Citys original 1849 annexation boundary. Maps and historical accounts characterize the Project Site and surroundings as open fields used for livestock grazing and growing corn. The first developments identified within the Project Site are single-family residences, present by 1899. The Project Site was subject to re- development during the 1920s during which time several Historic-period buildings were constructed and demolished. These construction-demolition episodes have compromised the integrity of the physical setting and likely destroyed or displaced any tribal cultural resources that may have been deposited on the surface or shallowly buried. These disturbances are represented by a stratum of artificial fill identified in bore logs.

It has been demonstrated elsewhere in the downtown portion of Los Angeles that deeply buried archaeological deposits can exist within alluvium below Historic-period disturbances and may also be intermixed with Historic-period debris. Alluvial deposits within the Los Angeles Basin can be massive, extending hundreds of feet below the surface, and may contain sediments deposited before human occupation of North America. Furthermore, most accumulations of alluvial sediments were formed by a combination of high- and low-energy depositional events. High-energy events are less likely to have preserved any material remains left on the surface by Native Americans, while low-energy floods tend to produce more favorable environments for the preservation of cultural materials. Thus, low-energy alluvial sediments dating to the Late Pleistocene or Holocene time-periods have the greatest potential for preserving tribal cultural resources. There is no absolute measure of depth below the surface in which sediments with these properties occur and site-specific conditions must be considered. Also, such soil conditions are an indicator of a setting favorable for preservation, but the presence of soils with these properties is not an absolute indicator of tribal cultural resources presence.

Sediment profiles compiled from geotechnical bores taken from within the Project Site described the uppermost soil stratum as artificial fill, between 2 and 6 feet. Historic brick and glass fragments were observed in this upper layer, likely due to the historic development of the Project Site, which lies above natural strata of Holocene-age alluvium. The alluvial sediments are composed of lenses of gravel, sand, silt, and clay derived from the Elysian and Repetto Hills to the north and the Los Angeles River to the east. The deposition is consistent with general trends for the Los Angeles Basin and those specifically within the floodplain of the Los Angeles River. The sediment profiles suggest higher-energy depositional zones beginning between 25 and 35 feet below the surface, with the deeper and coarser deposits occurring on the east portion of the Project Site. Between 5 and 25 feet below the surface the depositional trends suggest generally lower-energy events that have favorable conditions for preserving buried tribal cultural resources. Subtle variations may exist within this stratum that were not defined by the geotechnical study and could have relevance for tribal cultural resource preservation potential.

The Project Site is situated within the reported location of Rancheria de los Pipimares¬a village site occupied by Gabrielino from San Nicolas Island (known as Nicoleño) during the early and middle parts of the nineteenth century. There is potential for material remains associated with the rancheria to be preserved below the surface, especially those associated with the kotuumot kehaay (mourning ritual). Material remains associated with a mourning ritual may include any of the following: intentionally broken, burned, and buried, brownware (ceramic) and ground stone fragments, shell beads, fragments of human remains, pit or hearth-like features, and dancing surfaces. However, given the Historic-period disturbances and limited time during which any material remains from the occupation of the rancheria could have been buried and preserved, the overall sensitivity is reduced. It is possible that prehistoric archaeological material pre-dating the occupation of Rancheria de los Pipimares could also be present, but the sensitivity for such materials is lower. The

identification of brick and glass is indicative of the presence of historic resources within the disturbed upper layer, and because the Rancheria de los Pipimares existed concurrently with the historic development of Los Angeles, it is possible to uncover tribal cultural resources from this upper layer as well. Thus, while historical period disturbances from agriculture and urbanization have effectively lowered the sensitivity from what would otherwise be considered high, the sensitivity could not be considered low because of the favorable preservation conditions. Therefore, as part of the tribal cultural resources report (included in Appendix F-5 of this Draft EIR), SWCA concludes that the Project Site has moderate sensitivity for tribal cultural resources.

As a result, the sensitivity for unidentified tribal cultural resources within the Project Site is considered to be moderate, and impacts would be potentially significant. Specifically, there is a likelihood that material remains from a Gabrielino mourning ceremony are present in the Project Site, which would have cultural value to a California Native American tribe.

Cumulative Impacts

Impacts related to tribal cultural resources are site-specific and are assessed on a site-by-site basis. In addition, any related project within a historic district or affecting a historic resource that could be considered a tribal cultural resource would require a historic resource evaluation to ensure that removal of an existing building, addition of a new building, and/or conversion would not impact the historic resource in the area.

The Project would address any potential impacts to tribal cultural resources by adhering to the City's condition of approval and implementing Mitigation Measure M-1, as discussed above. The Project and related projects would comply with applicable federal, state, and city regulations that would preclude significant cumulative impacts regarding tribal resources. All related projects would comply with regulations for the inadvertent discovery of archaeological resources and human remains. In addition, related projects would be required to comply with the consultation requirements of AB 52 to determine and mitigate any potential impacts to tribal cultural resources. Therefore, cumulative impacts to tribal cultural resources would be less than significant and would not be cumulatively considerable. (Southern California Flower Market Project EIR at 4.M-7 Through 4.M-10)

The following mitigation measures were adopted through the EIR certification process for the Flower Market project: the retention of a qualified archaeologist to implement mitigation, preparation of a monitoring and mitigation plan, training of construction personnel on proper procedures to follow should unanticipated tribal cultural resources discoveries occur, and monitoring for tribal cultural resources by a qualified archaeologist and tribal monitors (approved by the consulting tribe) during excavation activities,

as well as extensive measures if artifacts were found to ensure proper handling, reporting and disposition. With imposition of the mitigation measures, the impacts were found to be less than significant.

- **Conversion and/or rehabilitation:** Existing nonresidential, residential and mixed-use structures could be converted or rehabilitated for new residential uses. The conversion or rehabilitation of existing properties would not involve new construction. Development projects of this type would be unlikely to cause ground disturbance and would have little potential to impact tribal cultural resources.

The Fernandeño Tataviam Band of Mission Indians requested consultation with the City. The initial consultation meeting was held on December 1, 2020. During the December 1, 2020 meeting, the tribal representative asked questions about the scope of the project, and requested information regarding future CEQA streamlining measures that may be included as part of the Proposed Project. At the conclusion of the meeting, the tribal representative requested that consultation remain open, that they be provided opportunity to provide recommended mitigation measures for inclusion in the EIR, and that they be provided an opportunity to review a draft of the EIR sections relating to cultural resources and tribal cultural resources. On December 15, 2020, the tribal representative provided via email correspondence a list of standard conditions and mitigation measures to be addressed and included within the Cultural Resource and Tribal Cultural Resource sections of the EIR. The requested conditions and measures have been incorporated in Mitigation Measures 4.15-1(a) and 4.15-1(b), below. On June 25, 2021, the tribal representative sent email correspondence indicating that they would like to conclude the consultation process.

Additionally, the Gabrieleno Band of Mission Indians also provided a response; however, after it was confirmed that the proposed Housing Element Update does not directly entail ground disturbance, no consultation was requested. No other tribes requested consultation.

Based on the above discussion, impacts to tribal cultural resources associated with housing development accommodated by the Housing Element Update would be ***potentially significant***.

Mitigation Measures

The following mitigation measures, in addition to Mitigation Measure 4.4-2 in Section 4.4, *Cultural Resources*, apply to all discretionary projects that involve ground disturbing activities:

4.15-1(a) Native American Consultation and Monitoring for Discretionary Projects

All cultural resource and tribal cultural resource assessment reports prepared shall include a record search with a study area of no less than 0.5 mile around the project area. Projects conducted in culturally and historically sensitive areas, as determined by a Qualified Archaeologist meeting the Secretary of

the Interior's Professional Qualification Standards for Archaeologist, should include a record search with a study area of no less than 1 mile around the project area.

Notification shall be provided to California Native American tribes that are traditionally and culturally affiliated with the geographic area of the project site and have submitted a written request to the Department of City Planning to be notified of proposed projects in that area. Should projects have potential to impact cultural resources, as determined during the environmental assessment or Tribal consultation, a Cultural Resources Monitoring Program (CRMP) shall be prepared by Qualified Archaeologist, in consultation with all interested Tribes, provided consultation under AB 52 is not required, prior to the commencement of any and all ground-disturbing activities for the Project, including any archaeological testing. The CRMP will provide details regarding the process for in-field treatment of inadvertent discoveries and the disposition of inadvertently discovered non-funerary resources and shall be consistent with the treatment of unique archaeological resources in PRC 21083.2.

4.15-1(b) Discovery of Potential Tribal Cultural Resources

In the event that Tribal Cultural Resources are discovered during Project activities, whether or not a tribal monitor is present, and there is no CRMP or the CRMP does not cover treatment of inadvertent discovery, all work within a 50-foot buffer of the find shall cease and a Qualified Archaeologist meeting the Secretary of the Interior's Professional Qualification Standards for Archaeology shall assess the find. Tribes that are culturally and historically affiliated with the Project area and have requested consultation shall be notified, should any potential tribal cultural resource be discovered during project implementation. Construction personnel shall not collect or move any tribal resources. Construction activity may continue unimpeded on other portions of the project site. Unless agreed otherwise during the tribal consultation process or in a CRMP, if tribal cultural resources are discovered during construction, the applicant and/or owner shall retain a Qualified Tribal Monitor (as approved by the Tribe) if requested by the Tribe. Any and all archaeological/cultural documents created as a part of the Project (isolate records, site records, survey reports, testing reports, and monitoring reports) should be provided to consulting Tribes. Any tribal cultural resources discovered shall be treated with appropriate dignity and protected and preserved as appropriate with the agreement of the Tribal Representative and in accordance with federal, state, and local guidelines. If not otherwise provided in the CRMP, the Lead Agency and/or applicant shall, in good faith, provide all consulting Tribes the opportunity to consult on the disposition and treatment of resources. The location of the find of tribal cultural resources and the type and nature of the find will not be published, except to provide information to the Qualified Archaeologist, tribal representatives, and public agencies with jurisdiction or responsibilities related to the resources. An agreement will be reached with the Tribal Representative to mitigate or avoid any significant impacts to identified tribal cultural resources. Absent an agreement

with the Tribal Representative, as provided in Public Resources Code Section 21083.2, the find should be preserved in place or left in an undisturbed state unless the Project would damage the resource. When preserving in place or leaving in an undisturbed state is not possible, excavation should not occur until testing or studies prepared by a Qualified Archaeologist have adequately documented the recovery of scientifically consequential information from and about the resource. Construction activity may continue unimpeded on other portions of the project site if cleared by the Qualified Tribal Monitor or Qualified Archaeologist. Ground Disturbance Activities in the area where resources were found may commence once the identified resources are properly assessed and processed by a Tribal Representative or, if no Tribal Representative is identified, a Qualified Archaeologist.

Significance After Mitigation

Implementation of the above measures, in combination with Mitigation Measure 4.4-2 in Section 4.4, *Cultural Resources*, would reduce impacts to tribal cultural resources to a less than significant level by requiring a process to identify (including through consultation with tribes) and, if necessary, avoid and/or recover identified tribal cultural resources for reasonably foreseeable housing developments under the Housing Element Update, including areas where resources have been previously identified. However, the City finds applying the mitigation measure to all ministerial housing development projects is infeasible based on the necessary resources to administer and enforce the measures, and the burdens placed on needed housing developments. Additionally, even with implementation of Mitigation Measures 4.4-2(a) and 4.15-1(a) and 4.15-1(b), based on unusual circumstances significant impacts may still occur. Based on these possibilities, impacts to tribal cultural resources remain ***significant and unavoidable.***

Cumulative Impacts

The geographic area to analyze cumulatively considerable tribal cultural resource impacts includes the entire City of Los Angeles. Cumulative development citywide could disturb areas that may potentially contain tribal cultural resources. Projects contributing to the cumulative impacts on tribal cultural resources include housing projects in the pipeline or already approved but not built and operational, as well as non-housing projects approved or in the pipeline or built during or before the plan horizon in 2029. The potential for impacts from individual developments is site-specific and depends on the location and nature of each individual development proposal. All future development projects, including build out of the RHNA accommodated by the Housing Element Update, would continue to be subject to existing federal, State and local requirements (as described in the *Environmental Setting* of this section and Section 4.4, *Cultural Resources*), and discretionary projects may be subject to project-specific mitigation requirements under CEQA. However, as discussed above in *Significance After Mitigation*, it would be infeasible to impose mitigation measures on ministerial projects and is foreseeable that the imposition of measures on some

discretionary projects may still have the potential to result in impacts. Therefore, although it is anticipated that cumulative impacts to tribal cultural resources can be avoided or minimized through implementation of mitigation measures on a project-by-project basis, impacts to tribal cultural resources remain a possibility citywide. Based on the above, the incremental effect of the Housing Element Update on tribal cultural resources would be cumulatively considerable and cumulative impacts to tribal cultural resources citywide would be ***significant and unavoidable***.

REFERENCES

Los Angeles, City of, Department of City Planning. 2018. Southern California Flower Market Project Draft Environmental Report. Prepared by CAJA Environmental Services, LLC. September. https://planning.lacity.org/eir/SoCal_FlowerMarket/DEIR/DEIR%20Sections/DEIR%20SoCal%20Flower%20Market.pdf. Accessed July 2021.

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_____. 2020. 11070 North Borden Avenue Residential Project Initial Study-Mitigated Negative Declaration. November. https://planning.lacity.org/odocument/4a1b9721-3be4-4a4d-b9e7-20fa4b3076e6/ENV-2020-1839.pdf. Accessed July 2021.

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4.16 UTILITIES AND SERVICE SYSTEMS

This section evaluates construction and operational impacts on utilities and service systems from build out of the Regional Housing Needs Assessment (RHNA) under the Housing Element Update. Specific topics addressed in this section of the EIR include wastewater, stormwater, water supply, potable water conveyance/facilities, electricity, natural gas, and telecommunication facilities. As discussed in the Initial Study (see Appendix A), implementation of the Housing Element Update would result in less than significant impacts related to solid waste generation, and compliance with federal, State, and local statues related to solid waste. Also, impacts to utilities and service systems from the Safety Element were found to be less than significant in the Initial Study. Therefore, these issues are not discussed further in this section.

As in other impact sections, the City is using the Appendix G thresholds of significance for utilities and service systems. However, for the benefit of the reader, this analysis of impacts under the Appendix G thresholds is organized based on the following utility and service system types: (1) Wastewater Facilities and Capacity and Stormwater Facilities, (2) Water Supply and Facilities, and (3) Electricity, Natural Gas and Telecommunication Facilities.

4.16.1. WASTEWATER AND STORMWATER

Environmental Setting

Wastewater

The City operates and maintains one of the largest wastewater collection systems in the nation, serving a population of over four million within a 600 square mile service area. The system consists of approximately 6,500 miles of sewers, 140,000 maintenance holes, and 44 pumping plants. In addition, there are about 700,000 privately owned and maintained sewer laterals in the City with an estimated total length of 11,000 miles. The City also provides wastewater conveyance and treatment services to 29 satellite collection systems under contractual agreements but is not responsible for management of those satellite collection systems.

The Los Angeles sewer system is comprised of three systems: the Hyperion Sanitary Sewer System, the Terminal Island Water Reclamation Plant Sanitary Sewer System, and the Regional Sanitary Sewer System. To comply with Waste Discharge Requirements (WDRs), a Sewer System Management Plan (SSMP) was prepared for each of these systems (Los Angeles Department of Public Works [LADPW] 2018). A description of each of the treatment facilities is provided below.

- The Hyperion Sanitary Sewer System is the largest of the City's three sanitary sewer systems. An average wastewater flow rate of approximately 300 million gallons per day (mgd) is treated by the system, which includes the Donald C. Tillman Water Reclamation Plant and the Los Angeles-Glendale Water Reclamation Plant and has a peak wet weather capacity of 800 mgd. The Donald C. Tillman Water Reclamation Plant services the area between Chatsworth and Van Nuys in the San Fernando Valley. The Los Angeles-Glendale Water Reclamation Plant is located in the San Fernando Valley and services the communities in east San Fernando Valley that are both within and outside of the City limits. Approximately 60 mgd is treated at Donald C. Tillman and Los-Angeles Glendale Water Reclamation Plants. All other flows in the system, and the biosolids from the Donald C. Tillman and Los-Angeles Glendale Water Reclamation Plants which are returned to the collection system, are treated at the Hyperion Water Reclamation Plant (HWRP) located in Playa Del Rey (LADPW 2017a).
- The Terminal Island Water Reclamation Plant Sanitary Sewer System covers residential areas in San Pedro, Harbor City and parts of Wilmington; and industrial areas on Terminal Island (LADPW 2017b). The Terminal Island Water Reclamation Plant has the capacity to provide high quality tertiary treatment for up to 30 mgd and currently treats approximately 12 mgd. Approximately 60 percent of the incoming flow to the plant comes from nearby industries while the remaining 40 percent is from residential areas.
- The Regional Sanitary Sewer System serves the Harbor Gateway, an area approximately of five square-miles (LADPW 2017c). Wastewater generated in the service area is processed at the Los Angeles County Sanitation Districts' Joint Water Pollution Control Plant located in the City of Carson.

Figure 4.16-1 on the following page illustrates the geographic area of each collection system and a summary of the collection system assets for each system is provided in Table 4.16-1.

Table 4.16-1 Summary of Collection System Assets

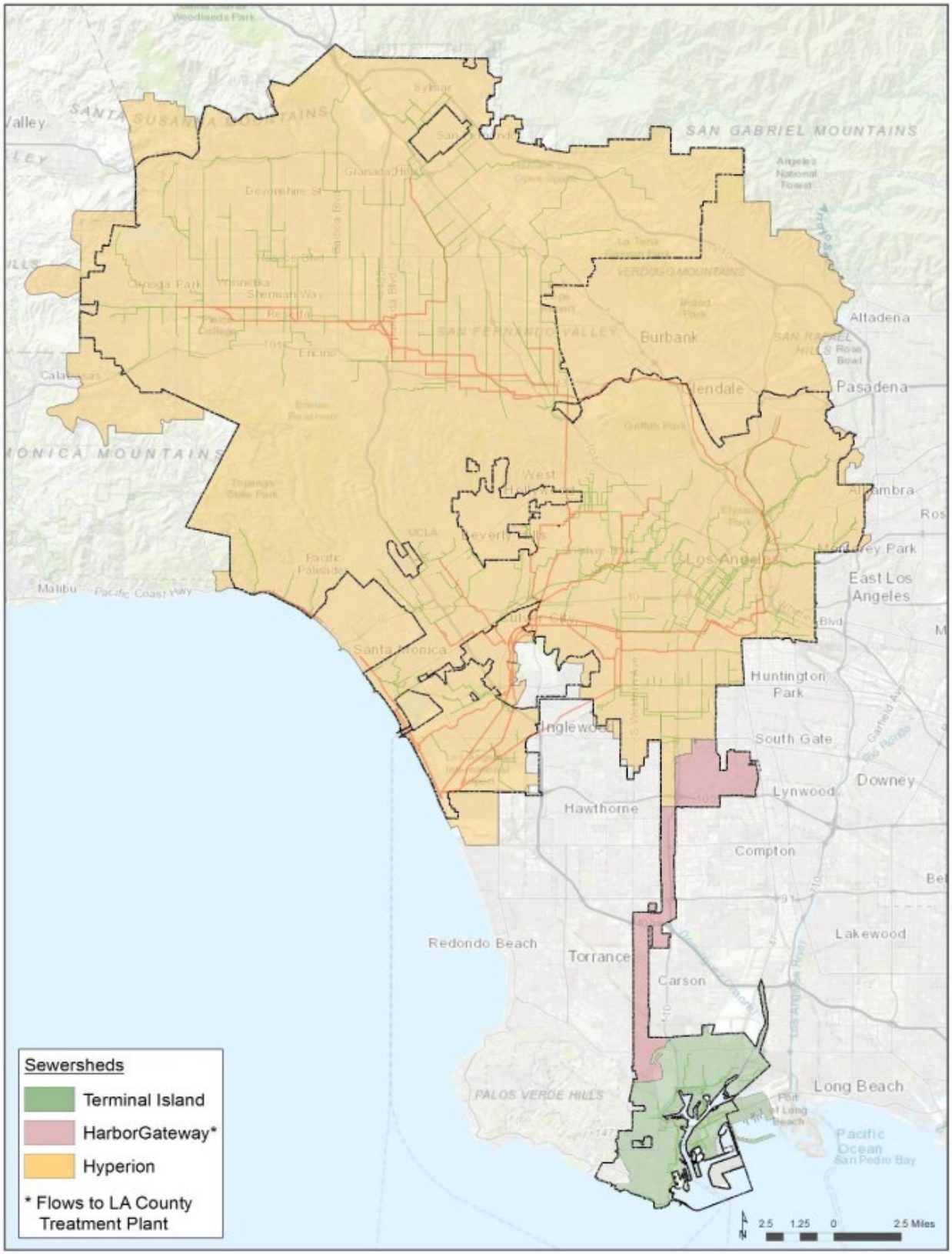
Collection System & ID[1]	Gravity Mains (miles)	Force Mains (miles)	Wastewater Conveyed (mgd)
Hyperion (4SSO10450)	6,043	20	260
Terminal Island (4SSO10491)	295	12	12
Regional (4SSO10502)[2]	101	1	0.26
Unified System Total	**6,349**	**33**	**~272**

[1] CIWQS WDID is the Waste Discharger Identification Number assigned to each of the City's collection systems in the California State Water Resources Control Board (SWRCB) California Integrated Water Quality System (CIWQS) database

[2] The regional collection system is served by the County Sanitation District's Joint Water Pollution Plant

Source: LA Sanitation & Environment (LASAN), Sewer System Management Plan 2019

Figure 4.16-1 City of Los Angeles Wastewater Collection and Treatment Systems



Source: LA Sanitation & Environment Sewer System Management Plan 2019

The wastewater collection system pipelines range in diameter from six inches to 150 inches and consist of approximately 6,700 miles of primary and secondary sewers. The sewer system consists of primary sewers (16-inches and larger in diameter) and secondary sewers (less than 16-inches in diameter). The secondary sewers provide service to property laterals and feed into the primary sewer lines. Primary sewers discharge into trunk, interceptor, and outfall pipes. Tributaries to interceptor sewer systems are called sewer reaches. Sewer reaches are usually named after the street to which their alignment is closest. Primary sewers have pipes with a diameter of 15 inches or more and are found in all sewer reaches. Interceptor sewer systems consist of large sewer pipelines that control the conveyance of wastewater to treatment plants.

To assess and maintain the condition of this expansive system, the City actively conducts an ongoing dry- and wet-weather flow monitoring program. There are 30 automatic "real time" flow monitors and 74 additional "near time" monitors located in the primary sewer system. The monitors use either telephone lines to send data to a central location or staff will download data in the field. Additionally, flow gauging is performed at over 600 strategic locations throughout the City's secondary sewer system on either a quarterly, semi-annual, or annual cycle to monitor flow depth.

New and rehabilitated sewers and pump stations are planned, designed, and constructed to meet the highest performance standards in the industry in accordance with the City's Sewer Design Manual. The Sewer Design Manual is a comprehensive set of criteria for planning and designing of new sewers, pump stations, force mains, and appurtenances, and for the rehabilitation of existing sewers. In conjunction with the Sewer Design Manual, the City also maintains Standard Plans, which are used to provide consistency and quality in design. All system components are designed to meet permit requirements of the various federal, state, and local agencies thereby ensuring that projects benefit from the input of all affected and interested parties, including the communities.

The Sewer Design Manual and Standard Plans are updated, maintained, and administered by the LA Sanitation & Environment (LASAN). For all projects, LASAN is responsible for determining the sewer capacity availability for new sewer connections for residential, commercial, and industrial developments. This function is part of an overall sewer connection permitting process that involves a combined effort by LASAN and Bureau of Engineering (BOE) personnel. In issuing a sewer connection permit, the BOE Development Services Division determines if further investigation is needed to evaluate the capacity of an existing sewer line to handle the additional flow from the proposed development or project and take appropriate preemptive action to attenuate potential emergency sewer overflow incidences in the future. In addition to preemptive sewer monitoring and permitting activities, the LASAN Wastewater Collection Systems Division also maintains up-to-date Sanitary Sewer Overflow Response and Reporting Procedures. The procedures outline the necessary actions to provide immediate response to sewage overflows. It is City policy that, "[e]very reported sewage spill affecting public or private property within the City of Los

Angeles shall be acted upon by the Division." Crew leaders are immediately notified upon receipt of a reported potential sewer overflow and are instructed to respond immediately.

The effect of stringent monitoring practices and sewer design standards are apparent in that the City has not experienced any wet-weather overflows since major relief sewers were completed in 2006. However, some dry-weather overflows still occur occasionally due to tree roots, grease blockages, landslides, and vandalism. Despite these irregular overflow occurrences, the system currently has sufficient capacity to handle peak dry-weather flows.

Sewer capacity planning is prioritized based on two ratios of sewer flow to sewer capacity (d/D): a Trigger ratio and a Relief ratio. Trigger flow is the quantity of flow, that once reached, would initiate planning for a relief or a replacement sewer. The buffer capacity is defined as the product of the estimated years to complete a new sewer project and the rate of recent flow increases in the sewer being evaluated. The Relief d/D is currently 0.75 across the City (i.e., when a sewer is at 75 percent of capacity) for all existing sewers, the Trigger d/D varies on a project by project basis because each project's tributary area has its own unique characteristics such as population growth projection, commercial and industrial discharge forecast, and other contributing factors that determine how quickly flows are projected to increase over time. The Sewer Design Manual requires all new sewers to meet a d/D of 0.5 for the projected design year (i.e., that they be at no more than 50 percent of capacity in their design year).

The Wastewater Capital Improvement Program (WCIP) identifies capital projects developed for the City's wastewater facilities. The WCIP is developed for 10-year periods and was last updated in Fiscal Year 2017/2018 for projects through 2026/2027. The WCIP includes replacement, rehabilitation, and expansion of the City's wastewater treatment and collection system facilities and is an ongoing planning effort to meet future wastewater capacity and serve Citywide buildout[1].

Storm Water and Urban Runoff

The City of Los Angeles is an urban center that is primarily paved. Consequently, most storm water and urban runoff travels along the City's roadways and is captured by storm drains and catch basins. The City is served by an extensive urban drainage system comprised of more than 30,000 catch basins and 100 miles of open channels (City of Los Angeles 2018a). Even on the driest days, tens of millions of gallons flow through the City's storm water system. On rainy days, flows can increase to as much as 10 billion gallons (City of Los Angeles 2018b). Storm water captured by the City's drainage system is channeled into Santa Monica and San Pedro Bays, where it is discharged without treatment (City of Los Angeles 2018b). The

[1] City of Los Angeles Department of Public Works, Bureau of Engineering, Wastewater Capital Improvement Program (WCIP), Fiscal Years 2018-19 through 2027-28, July 2018.
https://www.lacitysan.org/cs/groups/public/documents/document/y250/mdm1/~edisp/cnt035434.pdf. Accessed July 2021.

City's Stormwater Program focuses on flood control and pollution abatement and oversees the City's compliance with federal, state, and local regulations to reduce the amount of stormwater pollution. Regulations to reduce and prevent stormwater pollution are discussed in greater detail in Section 4.8, *Hydrology and Water Quality*.

Water Quality and Flow Monitoring

Los Angeles is constantly monitoring the infrastructure to ensure reliable service. Dischargers are regulated under WDRs and are required to "self -monitor," that is, to collect regular samples of their effluent and receiving waters according to a prescribed schedule to determine facility performance and compliance with their requirements. In addition to self-monitoring by dischargers, the Los Angeles Regional Water Quality Control Board (LARWQCB) makes unannounced inspections and collects samples to determine compliance with discharge requirements and receiving water objectives and to provide data for enforcement actions. The LARWQCB also responds to a variety of incidents, including accidental and illegal discharges of oil from offshore pipelines, oily waste discharges, and dumping in the storm drains. Each regional board in the state prepares a biennial Water Quality Assessment Report using data collected by regional planning, permitting, surveillance, and enforcement programs. The regional reports contain inventories of the pollutants in the major water bodies of the region.

The Flow Monitoring Expansion Program helps operations and maintenance to manage the conveyance system. Flow data is gathered to support resource allocation. There are 120 permanent monitors and 50 temporary monitors that continually measure flow quantities at major sewers.

Regulatory Framework

State

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.

Local

City of Los Angeles General Plan Framework

The Citywide General Plan Framework Element (General Plan Framework) establishes the conceptual basis for the City's General Plan.[2] The General Plan Framework sets forth a comprehensive Citywide long-range growth strategy and defines Citywide policies regarding land use, housing, urban form and neighborhood design, open space and conservation, economic development, transportation, infrastructure and public services. Chapter 9, Infrastructure and Public Services, of the City's General Plan Framework identifies goals, objectives, and policies for utilities in the City including wastewater collection and treatment. Goal 9A is to provide adequate wastewater collection and treatment capacity for the City and in basins tributary to City-owned wastewater treatment facilities.[3]

Los Angeles Integrated Resources Plan

The City of Los Angeles Integrated Resources Plan (IRP) was developed by multiple departments in order to address the facility needs of the City's wastewater program, recycled water, and urban runoff/stormwater management through the year 2020.

The Final IRP 5-Year Review was released in June 2012, which included 12 projects that were separated into two categories: (1) "Go Projects" for immediate implementation; and (2) "Go-If Triggered Projects" for implementation in the future once a trigger is reached.[4] Triggers for these projects include wastewater flow, population, regulations, or operational efficiency. Based on the Final IRP 5-Year Review, the Go Projects consisted of six capital improvement projects for which triggers were considered to have been met at the time the IRP EIR was certified. The Go-If Triggered Projects consisted of six capital improvement projects for which triggers were not considered to have been met at the time the IRP EIR was certified.

Since the implementation of the IRP, new programs and projects, which have resulted in a substantial decrease in wastewater flows, have affected the Go Projects and Go-If Triggered Projects. Based on the Final IRP 5-Year Review, two of the Go Projects have been moved to the Go-If Triggered category (Go Project 2 and Go Project 3) and two have been deferred beyond the 2020 planning window of the IRP (Go Project 4 and Go Project 5). Construction of wastewater storage facilities at the Donald C. Tillman Water

[2] City of Los Angeles Department of City Planning, Citywide General Plan Framework, An Element of the Los Angeles General Plan, July 27, 1995, https://planning.lacity.org/plans-policies/framework-element. Accessed September 2020.
[3] City of Los Angeles Department of City Planning, Citywide General Plan Framework Element, Chapter 9: Infrastructure and Public Services – Wastewater, originally adopted by City Council on December 11, 1996 and re-adopted on August 8, 2001, http://cityplanning.lacity.org/cwd/framwk/chapters/09/09.htm. Accessed September 2020.
[4] City of Los Angeles Department of Public Works Bureau of Sanitation and Department of Water and Power, Water Integrated Resources Plan 5-Year Review FINAL Documents, June 2012.
https://planning.lacity.org/eir/CrossroadsHwd/deir/files/references/M211.pdf. Accessed May 2021.

Reclamation Plant (Go Project 1) has been completed. In addition, Go Project 6, involving the design of the North East Interceptor Sewer Phase II, is no longer being pursued.[5]

Water IRP 5-year Reviews

The LADPW had been monitoring implementation of the IRP and updating its projections via the preparation Water IRP 5-Year Review Final Documents. The last 5-year review, prior to preparation of the One Water LA Plan that now supersedes the 5-year reviews as discussed below, was completed in 2012.[6] Based on updated 2008 Southern California Association of Governments (SCAG) data, the estimated future flow of the Hyperion Sanitary Sewer System was forecasted as 500 mgd by 2020, and approximately 496 mgd by 2018. At the same time, IRP data in the five-year review showed that the actual Hyperion Sanitary Sewer System service area flow was less than projected by the 2008 SCAG data used for planning. Per that data, the Hyperion Sanitary Sewer System service area flow had decreased from 400 mgd in 2002 to 350 mgd in 2012.[7] This could be attributed to such factors as water conservation and the economic downturn. The five-year Report estimated reductions in flow requirements indicating that there had been a reduction of wastewater flow of 26.5% relative to the amount estimated in the SCAG projection.

One Water LA 2040 Plan

In April 2018, the City prepared the One Water LA 2040 Plan (One Water LA Plan), an integrated approach to Citywide recycled water supply, wastewater treatment, and stormwater management.[8] The new plan builds upon the City's Water IRP, which projected needs and set forth improvements and upgrades to wastewater conveyance systems, recycled water systems, and runoff management programs through the year 2020, and extends its planning horizon to 2040. The One Water LA Plan proposes a collaborative approach to managing the City's future water, wastewater treatment, and stormwater needs with the goal of yielding sustainable, long-term water supplies for Los Angeles to ensure greater resilience to drought conditions and climate change. The One Water LA Plan is also intended as a step toward meeting the Mayor's Executive Directive to reduce the City's purchase of imported water by 50 percent by 2024.[9] Major

[5] City of Los Angeles Department of Public Works, Bureau of Engineering, Project Information Report, North East Interceptor Sewer (NEIS) Phase 2A.

6 City of Los Angeles Department of Public Works, Bureau of Sanitation, and Department of Water and Power, Water Integrated Resources Plan 5-Year Review FINAL Documents, June 2012, https://planning.lacity.org/eir/CrossroadsHwd/deir/files/references/M211.pdf. Accessed May 2021.

7 City of Los Angeles Department of Public Works, Bureau of Sanitation, and Department of Water and Power, Water Integrated Resources Plan 5-Year Review FINAL Documents, June 2012, https://planning.lacity.org/eir/CrossroadsHwd/deir/files/references/M211.pdf. Accessed May 2021.

8 City of Los Angeles, One Water LA 2040 Plan, Volume 1, Summary Report, April 2018, https://www.lacitysan.org/cs/groups/sg_owla/documents/document/y250/mdi2/~edisp/cnt026188.pdf. Accessed May 2021.

9 City of Los Angeles, Office of the Mayor, Executive Directive No. 5, Emergency Drought Response - Creating a Water Wise City, October 14, 2014, https://www.lamayor.org/sites/g/files/wph446/f/page/file/ED_5_-_Emergency_Drought__Response_-_Creating_a_Water_Wise_City.pdf?1426620015. Accessed September 2020.

challenges addressed in the One Water LA Plan include recurring drought, climate change, and the availability of recycled water in the future in light of declining wastewater volumes.

Green New Deal

The City released the first Sustainable City pLAn in April 2015[10], which has been updated in 2019 as the Green New Deal. The Green New Deal includes a multi-faceted approach to developing a locally sustainable water supply to reduce reliance on imported water, reducing water use through conservation, and increasing local water supply and availability. Towards the end, the Green New Deal establishes a target of recycling 100 percent of all wastewater for beneficial reuse by 2035, which would be an improvement from the fiscal year 2017-2018, baseline of 27 percent.[11]

The Green New Deal establishes a number of milestones and initiatives:

- 2021: Produce 1.5 mgd of recycled water at HWP for use at LAWA and other local facilities;
- 2025: Recycle 17,000 AFY of water at the Tillman WRP to recharge into groundwater basin;
- 2025/2035: Increase non-potable reuse of recycled water by an additional of 6,000 AFY 2025; and an additional 8,000 AFY by 2035; and
- 2025/2035: Reduce annual sewer spills to fewer than 65 by 2025; and 60 by 2035.

Sewer System Management Plan

The State of California, via the State Water Quality Control Board's May 2, 2006 Statewide General WDRs, requires a SSMP to be prepared for all publicly owned sanitary sewer systems. The plans include measures to control and mitigate sewer spills and must be made available to the public. Accordingly, the City has prepared three SSMPs, one for each of the three separate sanitary sewer systems owned and operated by LA Sanitation: the Hyperion Sanitary Sewer System, the City of Los Angeles Regional Sanitary Sewer System (Harbor Gateway); and the Terminal Island Water Reclamation Plant Sanitary Sewer System. The City's SSMPs were last updated in January 2019 as part of a required biennial internal audit.[12] The SMMPs address the proper management, operation, and maintenance of all parts of the systems. The SSMP establishes design and performance standards for the sewer system; provides procedures for evaluating the system and providing capacity assurance; and establishes a performance standard to identify sewers in

[10] City of Los Angeles, Sustainable City pLAn, 2015, http://plan.lamayor.org/wp-content/uploads/2017/03/the-plan.pdf. Accessed May 2021.
11 City of Los Angeles. LA's Green New Deal, 2019, page 47. http://plan.lamayor.org/sites/default/files/pLAn_2019_final.pdf, Accessed May 2021.
12 City of Los Angeles, Department of Public Works, Department of Sanitation, Sewer System Management Plan, Hyperion Sanitary Sewer System, January 2019, https://www.lacitysan.org/cs/groups/public/documents/document/y250/mdm1/~edisp/cnt035427.pdf. Accessed May 2021.

need of replacement or relief. The City's SSMP is in full compliance with the WDRs and meets applicable WDR objectives.[13]

Los Angeles Municipal Code

Los Angeles Green Building Code

The City has been pursuing a number of green development initiatives intended to promote energy conservation and reductions in the amount of greenhouse gas emissions generated within the City. While these ordinances do not focus on the provision of sewer services, they do mandate the use of water conservation features in new developments. Examples of such water conservation features include, but are not limited to, low water shower heads, toilets, clothes washers and dishwashers. Because the flow through these fixtures is reduced, residual wastewater passing through is reduced, in turn reducing the demand for sewage conveyance and treatment.

The Los Angeles Municipal Code (LAMC) Chapter IX, Article 9, the Los Angeles Green Building Code (LA Green Building Code, Ordinance No. 181,480),[14] was adopted in April 2008 and provides standards and a mechanism for evaluating projects for their water conservation features during site plan review. The LA Green Building Code has been subsequently amended to incorporate various provisions of the CALGreen Code. The LA Green Building Code includes mandatory requirements and elective measures pertaining to wastewater for three categories of buildings, the first of which applies to this Project: (1) low-rise residential buildings; (2) non-residential and high-rise residential buildings; and (3) additions and alterations to residential and non-residential buildings.

Water Efficiency Requirements Ordinance

LAMC Chapter XII, Article 5, the Water Efficiency Requirements Ordinance (Ordinance No. 180,822),[15] effective December 1, 2009, requires the installation of efficient water fixtures, appliances, and cooling towers in new buildings and renovation of plumbing in existing buildings, to minimize the effect of water shortages for City customers and enhance water supply sustainability.

Sewer Capacity Availability Review

The LAMC includes regulations that require the City to assure available sewer capacity for new projects and to collect fees for improvements to the infrastructure system. LAMC Section 64.15 requires that the City perform a SCAR when an applicant seeks a sewer permit to connect a property to the City's sewer

[13] City of Los Angeles, Department of Public Works, Department of Sanitation, Sewer System Management Plan, Hyperion Sanitary Sewer System, February 2017, https://www.lacitysan.org/cs/groups/public/documents/document/y250/mdey/~edisp/cnt012544.pdf. Overview. Accessed May 2021.

[14] City of Los Angeles, Ordinance No. 181480, https://www.ladbs.org/docs/default-source/publications/ordinances/l-a-green-building-code-ordinance-181480.pdf?sfvrsn=12. Accessed May 2021.

[15] City of Los Angeles, Ordinance No. 180822, http://clkrep.lacity.org/onlinedocs/2009/09-0510ord_180822.pdf. Accessed May 2021.

system, proposes additional discharge through their existing public sewer connection, or proposes a future sewer connection or future development that is anticipated to generate 10,000 gallons or more of sewage per day. [if applicable] A SCAR provides a preliminary assessment of the capacity of the existing municipal sewer system to safely convey a project's newly generated wastewater to the appropriate sewage treatment plant.

Sewerage Facilities Charge

LAMC Sections 64.11 and 64.12 require approval of a sewer permit, also called an "S" Permit, prior to connection to the wastewater system. LAMC Sections 64.11.2 and 64.16.1 require the payment of fees for new connections to the City's sewer system to assure the sufficiency of sewer infrastructure. New connections to the sewer system are assessed a Sewerage Facilities Charge. The rate structure for the Sewerage Facilities Charge is based upon wastewater flow strength as well as volume. The determination of wastewater flow strength for each applicable project is based on City guidelines for the average wastewater concentrations of two parameters, biological oxygen demand and suspended solids, for each type of land use. Sewerage Facilities Charge fees are deposited in the City's Sewer Construction and Maintenance Fund for sewer and sewage-related purposes, including, but not limited to, industrial waste control and water reclamation purposes.

Low Impact Development Ordinance

Under LAMC Section 64.72, all development projects in the City are required to integrate low impact development (LID) practices and standards for stormwater pollution mitigation to manage and capture stormwater runoff, to the maximum extent feasible, in priority order: infiltration, evapotranspiration, capture and use, treated through high removal efficiency biofiltration/biotreatment system of all of the runoff on site. High removal efficiency biofiltration/biotreatment systems are required to comply with the standards and requirements of the Development Best Management Practices (BMPs) Handbook.

Bureau of Engineering Special Order

The City establishes design criteria for sewer systems to assure that new infrastructure provides sewer capacity and operating characteristics to meet City standards (Bureau of Engineering Special Order No. SO 06-0691). Per the Special Order, lateral sewers, which are sewers 18 inches or less in diameter, must be designed for a planning period of 100 years. The Special Order also requires that sewers be designed so that the peak dry weather flow depth during their planning period does not exceed one-half of the pipe diameter (D) (i.e., depth-to-diameter ratio or d/D).[16]

[16] City of Los Angeles Department of Public Works, Bureau of Engineering, Special Order No. 006-0691, Planning Period, Flow, and Design Criteria for Gravity Sanitary Sewers and Pumping Plants, effective June 6, 1991, http://eng2.lacity.org/docs/sporders/1991/so00691.pdf. Accessed May 2021.

Environmental Impacts

Thresholds of Significance

The following thresholds of significance were developed in accordance with CEQA Guidelines Appendix G. Impacts would be significant if implementation of the Housing Element Update would:

- **Threshold 4.16-1**: Require or result in the relocation or construction of new or expanded wastewater treatment facilities, the construction or relocation of which could cause significant environmental effects
- **Threshold 4.16-2**: Require or result in the relocation or construction of new or expanded stormwater drainage facilities, the construction or relocation of which could cause significant environmental effects
- **Threshold 4.16-3**: Result in a determination by the wastewater treatment provider which serves or may serve the project that it does not have adequate capacity to serve the project's projected demand in addition to the provider's existing commitments

Methodology

For purposes of Thresholds 4.16-1 and 4.16-2 analysis, the Housing Element Update would have a significant impact if it resulted in the relocation or construction of wastewater or stormwater facilities and that relocation or construction caused a significant environmental effect, such as the demolition of a historical resource or destruction of a unique archaeological resource. Under these thresholds, not having adequate facilities to serve the project is not in and of itself a significant impact. Rather the question is whether construction of needed facilities results in environmental impacts. Therefore, analysis involves a two-part inquiry: first, whether the build out of the RHNA under Housing Element Update can be served by existing facilities or if it is reasonably anticipated to cause the need for new or relocated wastewater or stormwater facilities; and second, if it will need new or relocated wastewater or stormwater facilities, whether it is reasonably anticipated that construction or relocation of such facilities will result in a significant environmental impact. Wastewater facilities are considered in two categories: sewer treatment plants facilities and conveyance facilities.

For purposes of Threshold 4.16-3, the Housing Element Update would have a significant impact if the City did not have adequate wastewater treatment capacity to serve the build out of the RHNA.

To determine demand on wastewater treatment capacity and facilities for Thresholds 4.16-1 and 4.16-3, demand from build out of the RHNA is determined based on the physical connection of 420,327 housing units to the City's sewer system, and applicable water demand rates per housing unit included in the LADWP 2020 Urban Water Management Plan (UWMP). Long range water demand forecasts in the 2020

UWMP are based on SCAG growth projections for the 2020-2045 Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS), which projects increases in housing to address the housing shortage in Southern California and a related reduction in persons per household. Therefore, per the 2020 UWMP, per unit water demand is forecast to decline over time. This analysis applies the forecast 2030 rates to new housing development and conservatively assumes that wastewater generated by housing development would be 100 percent of indoor water use.

Regulatory Compliance Measures (RCM)

As discussed in the regulatory setting, the City has established regulatory requirements related to the provisions of wastewater or stormwater infrastructure. Among other requirements, any future development under the Housing Element Update, would be required to comply with the following RCMs:

- **RCM-UTIL-3 (Sewer Connection Regulations):** In compliance with LAMC Section 64.17, all housing development projects would be required to obtain a sewer connection permit from the Board of Public Works to construct, alter, or repair any house connection sewer or any portion of any house connection sewer and comply with all regulations for sewer connection.

Project Impacts and Mitigation Measures

Threshold 4.16-1	Would the Housing Element Update require or result in the relocation or construction of new or expanded wastewater treatment facilities, the construction or relocation of which could cause significant environmental effects?
Threshold 4.16-3	Would the Housing Element Update result in a determination by the wastewater treatment provider which serves or may serve the project that it does not have adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?

Impact 4.16-1, 4.16-3 Housing development accommodated under the Housing Element Update would foreseeably require minor upgrades for the conveyance of wastewater. However, the analysis shows that the environmental impacts associated with the construction or relocation of potentially required new or expanded wastewater infrastructure would be less than significant. Existing wastewater treatment plants serving the City have adequate capacity to treat project-generated sewage for the build out of the RHNA; therefore, impacts to wastewater facilities would be ***less than significant***.

Sewer Treatment Facilities

The Hyperion Service Area is the biggest wastewater service area in the City. The existing design capacity of the Hyperion Service Area is approximately 550 mgd (consisting of 450 mgd at the HWRP, 80 mgd at the Donald C. Tillman Water Reclamation Plant, and 20 mgd at the Los Angeles–Glendale Water Reclamation Plant). On average, 300 million gallons of wastewater enters the HWRP on a dry weather day, resulting in approximately 250 mgd of available daily capacity. Because the amount of wastewater entering HWRP can double on rainy days, the plant was designed to accommodate both dry and wet weather days with a maximum daily flow during peak wet weather of 800 mgd.

Housing development accommodated under the Housing Element Update would include 420,327 residential units, therefore the amount of wastewater generated would increase. As discussed in the methodology, this analysis uses water demand rates per housing unit in the LADWP 2020 UWMP and conservatively assumes that that wastewater generated by housing development would be 100 percent of indoor water use. The forecast increase in wastewater generation is shown in Table 4.16-2.

Table 4.16-2 Projected Wastewater Generation from The Housing Element Update

Land Use	Dwelling Units	Wastewater Generation Rate (gpd/unit)	Wastewater Generation (gpd)	Wastewater Generation (mgd)
Single-family Residential	76,920 du	183	14,076,360	14
Multi-family Residential	343,407 du	151	51,854,457	52
Total			**65,930,817**	**66**

Totals may not add up due to rounding.

du – dwelling unit

gpd – gallons per day

mgd – million gallons per day)

Source: Wastewater is assumed to be 100% of indoor water use. Per Exhibit 2E of the LADWP 2020 UWMP, indoor water use constitutes 56% of overall water use for single-family residences and 80% of overall water use for multi-family residences. Per the 2020 UWMP, per unit water demand is forecast to decline over time; the forecast 2030 rates per Exhibit 2L of the LADWP 2020 UWMP are assumed to apply to new development.

The potential increase in sewer demand from new units accommodated under the Housing Element Update is 65,930,817 gallons per day (gpd), or approximately 66 mgd. As shown between Figure 3-7 and Figure 3-8 in Section 3, *Project Description*, of this EIR, a lower concentration of housing development is anticipated in the Harbor Gateway, San Pedro, Harbor City, and Wilmington, which are all communities served by the Terminal Island Water Reclamation Plan and Regional Sanitary Sewer System, as shown in Figure 4.16-1. By comparison, the HWRP would treat the largest majority of wastewater generated by the Proposed Project.

Based on the above, the HWRP has approximately 250 mgd of available daily capacity and assuming that wastewater from all future development enters this plant, there is available capacity to serve the estimated 66 mgd increase under the Housing Element Update. This is a conservative estimate as it assumes that every new housing unit would be occupied by a new resident when instead it is likely that many would be occupied by existing residents who currently live in existing units in the city and are experiencing cost-burden or overcrowded conditions that would be alleviated by the construction of new housing units. Based on all of the above, build out of the RHNA under the Housing Element Update would not generate wastewater demand that would require the construction of new or expanded wastewater treatment facilities.

Sewer Conveyance Facilities

As a result of this increased sewer demand, it is reasonable to assume that new or upgraded sewer conveyance facilities will be needed as housing development is built out under the Housing Element Update due to the deteriorated conditions of existing main lines. As an example, some sewer lines conveying wastewater to the HWRP could be approximately 95 years old when considering that the City built and started operating the first treatment systems at the HWRP in 1925 (LASAN 2021). Laterals would be required to connect to main lines.

For individual housing development projects, the LAMC includes regulations that allow the City to assure available sewer capacity for new development projects and fees for improvements to the infrastructure system. LAMC Section 64.15 requires the City to perform a Sewer Capacity Availability Request (SCAR) when any person seeks a sewer permit to connect a property to the City's sewer collection system, proposes additional discharge through their existing public sewer connection, or proposes a future sewer connection or future development that is anticipated to generate 10,000 gallons or more of sewage per day. A SCAR is an analysis of the existing sewer collection system to determine if there is adequate capacity existing in the sewer collection system to safely convey the newly generated sewage to the appropriate sewage treatment plant.

An alternative capacity availability study called the Wastewater Services Information (WWSI) request can be performed to verify the sewer capacity of the adjacent sewer mains through a process run by LASAN. This preliminary evaluation reviews potential impacts to the wastewater system for the project in the same manner as the SCAR but does not expire in the way that the SCAR does. A WWSI evaluation would determine cumulative impacts and guide the planning process for any future sewer improvement projects needed to provide future capacity as the City grows and develops.

LAMC Section 64.11.2 requires the payment of fees for new connections to the sewer system to assure the sufficiency of sewer infrastructure. New connections to the sewer system are assessed a fee under a Sewerage Facilities Charge. The rate structure for the Sewage Facilities Charge is based upon wastewater flow strength, as well as volume. The determination of wastewater strength for each project is based on City guidelines for the average wastewater concentrations of two parameters, biological oxygen demand and suspended solids, for each type of land use. In addition, the City establishes design criteria for sewer systems to ensure that new infrastructure provides sewer capacity and operating characteristics to meet City Standards (Bureau of Engineering Special Order No. S006-0691). Per this Special Order, lateral sewers, which are sewers 18 inches or less in diameter, must be designed for a planning period of 100 years. The Special Order also requires that sewers be designed so that the peak dry weather flow depth during their planning period shall not exceed one-half the pipe diameter.

Otherwise, independent from the Housing Element Update project, the City has an adopted Capital Improvement Program to proactively undertakes capital improvement projects to not only maintain the existing infrastructure but also enhance and expand capacity of treatment plants, including to meet the goals of the Integrated Resources Plan. In 2006, the City approved the Integrated Resources Plan, which incorporates a Wastewater Facilities Plan. The Integrated Resources Plan was developed to meet wastewater needs of more than 4.3 million residents that were expected to live in the City by 2020. To meet future demands posed by increased wastewater generation, the City has chosen to expand its current overall treatment capacity, while maximizing the potential to reuse recycled water through irrigation, and other approved uses. The City has published the One Water Los Angeles 2040 Plan, which builds on the premise of the Integrated Resources Plan to maximize water resources and develop a framework for managing the City's watersheds, water resources, and water facilities. As with the Integrated Resources Plan, such efforts would be organized in three phases over a 23- year period from 2018 to the planning horizon of 2040. The "Near-term" phase will be 2018-2020, the "Mid-term" phase will be 2021-2030, and the "Long-term" phase will be 2031-2040. The phasing plan will comprise of 35 integration opportunities that will demonstrate how water management benefits can be integrated in a project through multiagency collaboration. The One Water Los Angeles 2040 Plan is currently in the "Mid-term" phase.

Projects which are part of the capital improvement plan that can serve the build out of the RHNA under the Housing Element Update would include rehabilitating old sewer mains and maintenance holes and replacing aging equipment and structures at treatment and pumping plants. As detailed in the existing setting, the City maintains the Capital Improvement Plan, which contains the capital projects and estimated costs for the renewal of the City's infrastructure at 10-year intervals.

The City also proactively monitors the sewer system to preemptively identify and resolve deficiencies before they become problematic. System deficiencies in need of rehabilitation are then included in the

WCIP, which are attended to according to their associated priority ranking. The City would require that localized system deficiencies are adequately addressed by the responsible housing project. Any future upgrades would be designed in accordance with applicable provisions of the Municipal Code and to the satisfaction of the City Engineer.

To the extent that sewer conveyance upgrades would be necessary to serve the build out of the RHNA in addition to those sewer facility projects undertaken through the City's CIP, such upgrades would likely occur within existing utility easements and roadways and would not result in new areas of disturbance. Upgrades may cause temporary traffic disruptions but would be subject to City requirements related to maintenance of traffic flow and emergency access and would not result in long-term effects. Most projects to replace a lateral or other sewer line would be exempt pursuant to Public Resources Code 21080.21, which exempts from CEQA the replacement or construction of a pipeline in a public street of less than one mile in length. Even a project that is not exempt under PRC 21080.21 would be foreseeably be eligible for a categorical exemption or a mitigated negative declaration. For example, a project to replace about 3.6 miles of the 36-inch trunk water line was found to have less than significant impacts with a MND in Century Boulevard near LAX (Century Trunk Line MND, July 2018, found at https://www.ladwp.com/). In any case, all such projects would be subject to subsequent environmental review, wherein potential site-or project-specific impacts, if any, would be addressed. To the extent that any significant impacts could result from unique characteristics of a specific site, those impacts would be speculative at this time.

The types of housing units accommodated under the Housing Element Update would generally fall into five categories of development projects. A review of the housing development in the City in Table 4-2, shows that none of the projects had a significant and unavoidable impact or required mitigation to reduce impacts to less than significant related to the construction or relocation of wastewater facilities. None of the projects had significant unavoidable impacts related to sewer capacity and only one of the 54 projects, the Hidden Creeks Estates Project, included a mitigation measure related to the wastewater capacity impacts, which is discussed further below.

- **Multi-family residential:** Multi-family residential projects may range in size from small apartment buildings with 2-10 units to larger apartment buildings and high-rise structures with hundreds of units. Multi-family developments of any size would increase the wastewater generated on a particular site. Multi-family developments are generally located in urbanized areas where wastewater infrastructure is already in place. These areas would likely be in the High and Highest Resources Tracts, as shown in Figure 3-5, and in areas where larger multifamily development is allowed today, such as Regional Centers and around transit. These areas of the City are already built out, so additional housing units would create a greater demand on existing wastewater resources which would result in the relocation or construction of facilities. However, developers would be required to comply with State and local

regulations that include LID requirements. As listed in Table 4-2 the Hollywood Center EIR analyzed the wastewater impacts for 1,005 multi-family residential units for wastewater impacts. The EIR provided the following analysis and impact conclusion for this impact:

Construction of the Project would include all necessary on- and off-site sewer pipe improvements and connections to adequately connect to the City's existing sewer system. Construction relative to the wastewater system for the Project would occur at the Project Site and immediate vicinity. Such activities would be confined to trenching to place the connections below the ground's surface and would be temporary in nature. The design of these connections would be developed by a registered engineer and approved by the BOE. If, during construction, existing sewer lines are found to be substandard or in deteriorated condition, the Project Applicant would be required to make necessary improvements to achieve adequate service under City's Building and Safety Code and the LADPW requirements. All necessary improvements would be verified through the permit approval process of obtaining a sewer connection permit from the City. Further, all construction activities that would happen in coordination with the appropriate agencies, including the LADPW, LASAN, and BOE. These agencies would provide input on the Project and would coordinate with the Project Applicant before, during, and after construction activities. This coordination would ensure that impacts would be less than significant. Therefore, based on these factors, Project construction would not require or result in the relocation or construction of new or expanded wastewater treatment facilities, the construction or relocation of which could cause significant environmental effects, and impacts would be less than significant.

[…]

The Project's increase in wastewater generation of 0.312 mgd would represent approximately 0.057 percent of the Hyperion Sanitary Sewer System's estimated capacity of 550 mgd and approximately 0.069 percent of the HWRP's current design capacity of 450 mgd. As previously stated, the HWRP currently receives flows of approximately 275 mgd; this represents approximately 61 percent of its capacity and leaves approximately 175 mgd of remaining daily capacity. The Project's contribution of approximately 0.312 mgd of wastewater represents 0.18 percent of HWRP's remaining daily capacity of 175 mgd, which is a negligible increase in the wastewater volumes treated at the HWRP. As required by LAMC Section 64.14, further detailed gauging and evaluation would be conducted as part of the normal permitting process to obtain final approval of sewer capacity and connection permits for the Project. In addition, Project-related sanitary sewer connections and on-site infrastructure would be designed and constructed in accordance with applicable LASAN and California Plumbing Code standards. Furthermore, in accordance with LAMC Sections 64.11 and 64.16.1, the Project would pay the required sewer connection fees to help offset the Project's contribution to the City's wastewater collection infrastructure needs and would require approval of sewer permits prior to connection to the sewer system. Therefore, estimates of the Project's wastewater generation and the remaining capacity in the HWRP and Hyperion Sanitary Sewer System are considered conservative. Nonetheless, the

calculations demonstrate that the HWRP and Hyperion Sanitary Sewer System would have available capacity to treat the Project's wastewater generation.

- **Single-family residential:** Single-family residential projects may range in size and scale from smaller or larger single-family homes to small-lot subdivisions and multi-property single-family subdivisions. Single-family developments of any size would increase the use of existing wastewater facilities. Small single-family projects, such as small subdivisions with few net new homes, would be more likely to occur in residential areas throughout the City and would not result in a substantial increase in wastewater generation in a neighborhood. Therefore, small single-family projects would not substantially increase the use of wastewater facilities. However, large single-family projects, such as small lot subdivisions, could be built throughout the City, but would be more likely to occur as infill development in more urbanized areas of the City, including areas near public transit. Although, if large single-family projects are permitted in an area where denser urban development is not present, new wastewater infrastructure may be required, which could result in environmental impacts. However, these impacts would be most likely within existing or proposed roadways and therefore would not generate significant impacts that would require mitigation. As stated above, none of the projects reviewed and referenced in Table 4-2, found that impacts associated with wastewater generation were significant or required mitigation measures.

  Development of undeveloped land in the City is more common on single-family lots in the hillsides. The York Residence project is a more typical type of development in the hillsides, although on a larger site than typical. The York Residence project located in the Hollywood Community Plan area, proposed to construct a 9,250 square foot single family home on an approximately 40-acre lot. The project site was in the Santa Monica Mountains in the Lake Hollywood section of the City on a lot abutting undeveloped areas. Construction involved constructing a 20-foot private driveway/fire access and grading 37,000 cubic yards of cut and 37,000 cubic yards of fill. Although a portion of the site was to be built on undeveloped land, another portion was found to already connect to a municipal water and wastewater system and was currently served by public utilities. The MND determined that the project would connect to existing public water and wastewater pipelines beneath West Innsdale Drive and extend private underground water and wastewater infrastructure onto the site. The MND concluded that the project would not require or result in the relocation or the construction of new or expanded wastewater treatment or storm drainage and impacts were found to be less than significant.

  The Hidden Creek Estates Project involved a project to annex 109 acres of land to the City adjacent to Porter Ranch, for a single-family development with 188 single family housing units. The EIR provided the following analysis and impact conclusion related to impacts from the construction or relocation of sewer facilities impact:

As described in Section IV.H, Hydrology and Water Quality, the project design includes an 8.1-acre retention and water treatment basin located in the southern portion of the project site at an elevation of approximately 1,370 feet. This basin would retain surface runoff during storms such that the runoff can be properly treated before its discharge into Browns Canyon Wash. The secondary purpose of the retention and water treatment basin is to facilitate a slow release downstream as well as to allow surface water runoff the opportunity to percolate into the ground to recharge groundwater. Since the retention and water treatment basin is designed to slowly discharge its water into Browns Canyon Wash, mitigation measure MM-WR-1 requires the use of wetland vegetation to absorb nitrogen and phosphorus and improve the quality of the surface runoff as it is stored in the basin. Compliance with regulations including the applicable MS4 permit, SUSMP, City's LID Ordinance and Irrigation Guidelines would reduce the number of contaminants entering surface runoff. As such, construction or expansion of existing facilities would not be required, and any other storm water drainage impacts associated with implementation of the project would be mitigated to a less than significant level.

For the impacts related to sewer capacity, the EIR provided the following analysis and impact conclusion:

The estimated wastewater generation for the project is anticipated to be approximately 96,126 gpd. Hyperion, which ultimately treats the City's sewage, is operating at 110 million gpd below capacity. The projected 96,126 gpd of wastewater generated by the project represents less than 0.1 percent of this excess capacity. Based on the results of the gauging described above, the Bureau of Sanitation has indicated that the existing sewer system may be able to accommodate the project's anticipated wastewater flow; however, the local 8-inch line serving the project site may have insufficient capacity, resulting in a significant impact. Therefore, MM-WW-1 states the project applicant shall install any required upgrade, such as a secondary line connecting to the nearest 18-inch line, in order to accommodate the project's wastewater flow as deemed necessary by the Bureau of Sanitation.

Although the wastewater impact for the Hidden Creek Estates Project required mitigation, the project was unusual as it proposed to annex new land to the City. The project also involved developing over 200 acres of previously undeveloped land. Similar housing development projects under the Housing Element Update are not anticipated. As such, the impacts for the Hidden Creek Estates Project are not typical and anticipated for other single-family development projects accommodated by the Housing Element Update.

- **ADUs:** ADUs include attached ADUs created through a building addition or conversion of existing floor area and detached ADUs of various scales, which are allowed in any zone that allows for residential use, as well as on any site that contains an existing residential use. An ADU would result in one or more additional units on a property containing existing or proposed residential units, which

would not substantially increase the wastewater generation in an area; therefore, impacts are anticipated to be less than significant.

- **Mixed use development:** Mixed use development could range in size and scale from neighborhood commercial mixed use with smaller nonresidential uses, to high-rise mixed use with larger nonresidential uses. Mixed Use developments are generally located in urbanized areas with existing wastewater infrastructure and are expected to occur as infill development. Developers would be required to supply will-serve letters for projects and comply with LID requirements for wastewater generation. For example, as listed in Table 4-2, the Sunset and Gordon EIR analyzes a proposed multi-family mixed use development with 311 multifamily housing units for wastewater impacts. The EIR provided the following analysis and impact conclusion for this impact:

  The Modified Project would result in modifications to the CRA Approved Project's residential units and commercial floor area for retail and commercial spaces, which could have the potential to change the wastewater flows as compared to the impacts disclosed in the Certified EIR. As shown in Table IV.I-4, the Modified Project is anticipated to generate approximately 40,040 gallons per day (gpd of net wastewater, or 14.6 million gallons annually and approximately 49,439 gpd of gross wastewater, or 18 million gallons annually. For comparative purposes, the Modified Project's net increase in wastewater generation would be 40,040 gallons per day (gpd) of wastewater, or 14.6 million gallons annually as compared to the CRA Approved Project's net increase of 48,963 gallons per day (gpd) of wastewater, or 17.8 million gallons annually as estimated in the Certified EIR. Therefore, the Modified Project's net increase in wastewater generation would be less than the CRA Approved Project's net increase in wastewater generation. The Modified Project's gross increase in wastewater generation would be 49,439 gpd of wastewater, or 18 million gallons annually as compared to the CRA Approved Project's gross increase of 58,362 gpd of wastewater, or 21.3 million gallons annually. Therefore, the Modified Project's gross increase in wastewater generation also would be less than the CRA Approved Project's gross increase in wastewater generation. No further improvements to the wastewater system, including installation of a secondary line, serving the Project Site or surrounding area are anticipated to be required as a result of the Modified Project, as the modifications under the Modified Project would decrease wastewater flows as compared to the CRA Approved Project and the vacant 22-story, approximately 250 foot high mixed use building and closed approximately 18,962 square foot public park on the Project Site did not require improvements to the wastewater system. The Modified Project's projected gross increase of 49,439 gpd is within the gross increase estimated for the CRA Approved Project, and would represent a fraction of one percent of the excess treatment capacity presently available at the Hyperion Treatment Plant (450 mgd). Similar to the CRA Approved Project, sewage generated by the Modified Project would continue to be conveyed and treated at the Hyperion Treatment Plant, which has adequate capacity to accommodate the increased wastewater flows. Thus, the Regional Water Quality Control

Board (RWQCB) treatment standards area would be maintained and impacts would be less than significant, which is consistent with the analysis in the Certified EIR for the CRA Approved Project.

[…]

Furthermore, implementation of regulatory compliance measure CM I.2-1, which ensures compliances with the 2010 L.A. Green Code, would further reduce the Modified Project's less than significant impacts related to wastewater services. Therefore, the wastewater impacts as a result of operation of the Modified Project would not substantially increase the wastewater impacts identified in the Certified EIR for the CRA Approved Project. Therefore, consistent with the analysis in the Certified EIR for the CRA Approved Project, the Modified Project would be consistent with the wastewater treatment requirements of the RWQCB, there is adequate capacity to serve the Modified Project, and the Modified Project would not require the construction of new wastewater treatment facilities or expansion of existing facilities. Accordingly, impacts with respect to the existing wastewater infrastructure would be less than significant. Moreover, the wastewater generation of the Modified Project is less than the wastewater generation of the CRA Approved Project. Accordingly, as compared to the CRA Approved Project, the proposed Modified Project would not involve new significant environmental effects or a substantial increase in the severity of previously identified significant effects related to wastewater services. (Sunset and Gordon EIR, pg IV.I-28 to IV.I-30)

- **Conversion and/or rehabilitation:** Existing nonresidential, residential, and mixed use structures could be converted or rehabilitated for new residential uses in areas throughout the City. The conversion or rehabilitation of existing properties would not involve new construction but may result in full-time residents in structures that were previously not occupied by residents. An increase in residents would be minimal under small conversion projects (approximately 2-10 units), which would not result in significant impacts to existing wastewater infrastructure. A large conversion or rehabilitation project may result in hundreds of new residents in a building, which may result in potentially significant impacts to existing wastewater infrastructure. However, developers would be required to comply with State and local regulations that include the provision of will-serve letters for the wastewater provider. The Crossroads Hollywood Project, as listed in Table 4-2, is a mixed use project that involves both conversion and rehabilitation and new construction. The project would rehabilitate Crossroads of the World and the former Hollywood Reporter Building. The entire project includes 950 residential units with hotel, commercial/retail, office, entertainment, and restaurant uses. The EIR for this project stated that potential impacts to wastewater facilities would be less than significant due to the capacity of the Hyperion Wastewater Treatment Plant and because of the requirement that the by LAMC Section 64.14 that detailed gauging and evaluation of sewer capacity is required prior to the issuance of a will-serve letter during the permitting process.

Based on all of the above, there is adequate wastewater treatment capacity to serve the Housing Element Update. The Housing Element Update will not result in the need for the construction of new sewer treatment facilities. Build out of the RHNA will foreseeably result in the need for upgraded sewer lines but such impacts are expected to be less than significant based on their construction and installation in existing right of way and other public easements that have been previously disturbed and based on existing regulatory compliance measures and review and oversight by relevant City agencies. Any site specific conditions that would result in significant impact would be speculative. Additionally, any project to install or relocate wastewater facilities would be subject to future environmental review and necessary mitigation to address site specific conditions. Therefore, impacts are ***less than significant***.

Mitigation Measures

No significant impact would occur; therefore, mitigation is not required for housing development accommodated under the Housing Element Update.

Threshold 4.16-2	Would the Housing Element Update require or result in the relocation or construction of new or expanded stormwater facilities, the construction or relocation of which could cause significant environmental effects?

Impact 4.16-2 Residential developments accommodated under the Housing Element Update would adhere to citywide regulations, such as the Low Impact Development and Model Water Efficient Landscape Ordinance to reduce stormwater run-off. Because the Housing Element Update is not anticipated to require or result in the relocation or construction of new or expanded stormwater conveyance systems that would cause significant environmental impacts, impacts would be ***less than significant***.

Residential development accommodated under the Housing Element Update would not result in a substantial increase in impervious surfaces since they would be focused in urban infill areas already largely covered with impervious surfaces and thus generally would not substantially increase or otherwise substantially alter stormwater flow. Compliance with the City's BMPs and LID Ordinance, discussed in the Regulatory Setting, would ensure that any future housing development under the Housing Element Update would not require construction of new stormwater drainage facilities and or expansion of existing facilities beyond specific improvements needed for individual development projects. In the long-term, redevelopment of properties in the City would improve surface water quality by replacing older development with new development that incorporates current standards, which include LID methods. Further, under the City's LID requirements, post-construction stormwater runoff from new projects must

be infiltrated, evapotranspiration, captured and used, and/or treated through high efficiency BMPs on-site for the volume of water produced by the greater of the 85th percentile storm event or the 0.75-inch storm event.

New residential developments would incorporate required water quality and storm water management features into the overall site and landscape design and would not be expected to detrimentally affect storm water drainage facilities. Under RCM-UTIL-3, a project would be required to comply with the City's Water Management Ordinance, which imposes various water conservation measures in landscape, installation and maintenance. In addition, future development projects would incorporate the Model Water Efficient Landscape Ordinance (MWELO) to reduce water use and on-site retention. Through MWELO, all on-site automobile parking areas are required to be drained to collect, retain, and infiltrate surface water on-site. MWELO aims to facilitate the implementation of rainwater catchment devices since they are exempt from rooftop screening requirements, which would reduce storm water runoff rates and volumes.

Implementation of the Housing Element Update is not anticipated to require or result in the relocation or construction of new or expanded stormwater conveyance systems that would cause significant environmental impacts, and impacts would be ***less than significant***.

The types of housing units accommodated under the Housing Element Update would generally fall into five categories of development projects. A review of the housing development in the City in Table 4-2 shows that stormwater impacts were less than significant for each of the 54 developments reviewed and that no mitigation was required. The following discusses stormwater impacts and provides examples for these project types.

- **Multi-family residential:** Multi-family residential projects may range in size from small apartment buildings with 2-10 units to larger apartment buildings and high-rise structures with hundreds of units. Multi-family developments of any size would potentially increase the stormwater runoff on the site. These areas would likely occur as infill development in the High and Highest Resource Tracts, as shown in Figure 3-5, and in areas where larger multifamily development is allowed today, such as Regional Centers and areas near transit. These areas of the City are already built out; therefore, development would not create additional impervious surfaces that would in turn generate additional stormwater runoff. The Hollywood Center EIR analyzed the stormwater impacts for 1,005 multi-family residential units in Section IV.G, Hydrology and Water Quality. This EIR found that the Project's construction impacts (e.g., earth moving, maintenance/operation of construction equipment, potential dewatering, and handling/storage/disposal of materials) related to stormwater would be less than significant with compliance with the National Pollutant Discharge Elimination System (NPDES) Construction General Permit (Order No. 2009- 0009-SWQ). In accordance with the requirements of the

permit, the Project would require the preparation and implementation of a site-specific Stormwater Pollution Prevention Plan (SWPPP) that adheres to the California Stormwater Quality Association BMP Handbook. The SWPPP would specify BMPs to be used during construction. BMPs would include, but not be limited to, erosion control, sediment control, non-stormwater management, and materials management BMPs. Furthermore, during operation, the Project would be required to comply with the City's LID requirements and include stormwater capture and use system that would minimize the potential for on- and off-site erosion, siltation, and flooding. This capture and use system would reduce the amount of stormwater runoff that flows into the stormwater conveyance systems. The EIR found that the Project's impacts related to stormwater would be less than significant and no mitigation would be required.

- **Single-family residential:** Single-family residential projects may range in size and scale from smaller or larger single-family homes to small-lot subdivisions and multi-property single-family subdivisions. Small single-family projects, such as small subdivisions with few net new homes, would be likely to occur in residential areas throughout the City and would not result in a substantial increase in stormwater runoff in a neighborhood. Therefore, small single-family projects would not substantially increase the use of wastewater and stormwater facilities. Larger single-family projects, such as small lot subdivisions, could be built throughout the City, but would be more likely to occur as infill development in more urbanized areas of the City, including areas near public transit. Should these developments occur in areas outside the existing urban development area, new stormwater infrastructure would be required which could have environmental impacts. However, these improvements would be within existing or proposed roadways and would not cause impacts beyond those of constructing the roadways. The Hidden Creek Estates EIR analyzes a proposed single-family development with 188 single family housing units for stormwater impacts in Section IV.H, Hydrology and Water Quality. The EIR found that impacts associated with the project's increase in stormwater runoff during construction would be reduced to less than significant levels through preparation of a SWPPP, which would identify the various BMPs to reduce water contamination, sedimentation, and erosion. At project operation, compliance with the City's LID requirements would require the integration of BMPs designed to remove pollutants once they are mobilized by rainfall and runoff. Examples of applicable BMPs include the installation of an infiltration trench, roof runoff controls, and grassed buffer filter strips designed to treat sheet flow from adjacent surfaces and reduce excess irrigation water from entering the stormwater drainage systems. The EIR found that the project's impacts related to stormwater would be less than significant and no mitigation would be required.
- **ADUs:** ADUs include attached ADUs created through a building addition or conversion of existing floor area and detached ADUs of various scales, which are allowed in any zone that allows for residential use, as well as on any site that contains an existing residential use. An ADU would result in

one or more additional units on a property containing existing or proposed residential units, which would not substantially increase the stormwater generation in an area; therefore, impacts would be less than significant.

- **Mixed use development:** Mixed use development could range in size and scale from neighborhood commercial mixed use with smaller nonresidential uses, to high-rise mixed use with larger nonresidential uses. Mixed Use developments are generally located in urbanized areas with existing stormwater infrastructure. These areas would include areas zoned for multifamily residential or mixed use development that are located near transit and in Regional Centers. Additional mixed use developments of varying scales could also be located in the High and Highest Resource Tracts shown in Figure 3-5, as a result of the Rezoning Program. Developers would be required to supply will-serve letters for projects and comply with LID requirements for stormwater runoff. The Sunset and Gordon EIR analyzes a proposed multi-family mixed use development with 311 multifamily housing units for wastewater and stormwater impacts. The EIR found that the project's increase in stormwater runoff would be within the capacity of the existing storm drain system and therefore impacts would be less than significant and no mitigation would be required. Furthermore, the analysis determined that the project's stormwater catch basins and planters consistent with the City's LID requirements such that the project would not change the capacity of retention basins or increase the volume of surface water runoff which would adversely impact the quality of receiving waters. As such the project would not have the potential to alter existing drainage patterns or create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff.
- **Conversion and/or rehabilitation:** Existing nonresidential, residential, and mixed use structures could be converted or rehabilitated for new residential uses in areas throughout the City. The conversion or rehabilitation of existing properties would not involve new construction but may result in full-time residents in structures that were previously not occupied by residents. An increase in residents in the building would be minimal under small conversion projects (approximately 2-10 units), but could involve larger buildings involving hundreds of units. Whether a small or larger conversion/rehabilitation project, such a project that does not increase the footprint of the existing building would not alter stormwater runoff rates or overall surface water flow. To the extent that a conversion or rehabilitation project does involve new construction, the impacts from that construction would be similar to those explained above for mixed use and/or multi-family residential development. For example, the Crossroads Hollywood Project, as listed in Table 4-2, is a mixed use project that involves both new construction and rehabilitation of the Crossroads of the World and the former Hollywood Reporter Building. The entire project includes 950 residential units with hotel, commercial/retail, office, entertainment, and restaurant uses. The EIR for this project stated that

potential impacts to stormwater facilities would less than significant due to the capacity of the existing stormwater drain system.

None of the environmental assessments for housing reviewed for this EIR identified significant unavoidable impacts to stormwater or the need for mitigation (see Table 4-2).

Mitigation Measures

No significant impact would occur; therefore, mitigation is not required for housing development accommodated under the Housing Element Update.

4.16.2. WATER SUPPLY AND FACILITIES

Environmental Setting

The Los Angeles Department of Water and Power (LADWP) is responsible for providing water to the City while complying with County, State, and Federal regulations. The primary LADWP sources of water supplies are the Los Angeles Aqueduct (LAA), local groundwater, State Water Project (supplied the Metropolitan Water District [MWD]), and Colorado River Aqueduct (supplied by MWD). Recycled water projects are progressing and expected to be a greater portion of LADWP water supply in the future. Overall, these sources of water provide the necessary water to meet LADWP's water demands.

Water Supply

Los Angeles Department of Water and Power

According to the City's 2020 UWMP, total water demand in 2020 totaled an estimated 495,685 acre-feet per year (afy) based on an annual average water demand between the years 2016 and 2020. The 2020 UWMP water demand projection for 2030 is approximately 660,200 afy, based on normal weather conditions, and 693,200 afy, based on dry year conditions (LADWP 2020).

The LAA has historically been the primary source of the City's water supply (average of 48 percent between 2016 and 2020). In recent years, however, the amount of water supplies from the LAA has been limited due to environmental concerns, and the City's water supply relied heavily (average of 41 percent) on the purchased water from MWD delivered from the Colorado River or the Sacramento-San Joaquin Delta. Local ground water has been a reliable water source, providing an average of 9 percent of the total water supply, but there have been concerns in recent years due to declining groundwater level and contamination issues. The City's recycled water supply is limited to specific projects within the City at this time (LADWP 2020).

Los Angeles Aqueduct

The LAA system extends approximately 340 miles from the Mono Basin to the City. Since its construction in the early 1900's, the LAA historically provided the vast majority of water for the City. The LAA conveys snowmelt runoff from the eastern Sierra Nevada Mountains and water supplies are supplemented by groundwater pumping. LAA supplies fluctuate from year to year due to varying annual snowfall and hydrological conditions. In recent years, the LAA supplies have decreased because of environmental obligations to dedicate water resources to mitigate groundwater pumping in the Owens Valley, restore the water level of Mono Lake, and mitigate dust emissions from Owens Lake. The Runoff Forecast Model and the Los Angeles Aqueduct Simulation Model (LAASM) was used jointly to predict water available from the LAA. Absent any system improvements, average long-term LAA delivery over the next 25 years is expected to be 192,000 AFY (LADWP 2020).

Local Groundwater

In addition to groundwater extraction from nine wellfields throughout the Owens Valley, the LADWP extracts from three local groundwater basins: San Fernando, Sylmar, and Central. The LADWP is also entitled to produce water from the neighboring West Coast Basin. The LADWP plans to continue future pumping from the local basins, with limitations based on water quality and overdraft protection. The LADWP's groundwater pumping strategy is based on a "safe yield" strategy, in which the amount of water removed over a period of time equals the amount of water entering the groundwater basin through native and imported groundwater recharge. Further, protection from potential overdraft conditions is provided by the court-appointed Los Angeles River Area Watermaster for the San Fernando and Sylmar Basins, and a court-appointed Watermaster Panel for the Central Basin (LADWP 2020). Annually, the Watermaster prepares a Watermaster Service Report indicating groundwater extractions, replenishment operations, imported water use, recycled water use, finances of Watermaster services, administration of the water exchange pool, and significant water-related events in the Central Basin. Additionally, a long-term groundwater management agreement between the City and Inyo County ensures the protection of LADWP's groundwater resources in Owens Valley from overdraft conditions.

Local groundwater provides approximately 9 percent of the total water supply for the City and, since 1970, has provided up to 23 percent of the total water supply during extended dry periods when imported supplies were less reliable. On average, about 96 percent of the LADWP's groundwater supply is extracted from the Upper Los Angeles River Area (including the San Fernando and Sylmar basins, while the Central Basin provides the remaining 4 percent (LADWP 2020). The Upper Los Angeles River Area watershed encompasses four local groundwater basins:

- San Fernando
- Verdugo
- Sylmar
- Eagle Rock

The average LADWP San Fernando, Sylmar, and Eagle Rock basin entitlements under the judgment are 87,000 afy, 3,570 afy, and 500 afy, respectively (LADWP 2020). The Central Basin Judgment entitlement for the LADWP is 17,236 afy. The West Coast Basin Judgment entitles LADWP to approximately 1,503 acre-feet per year. LADWP does not currently exercise its water rights in the West Basin. In addition, as of October 2018, LADWP has accrued 591,460 afy of stored water credits, which is water that LADWP can withdraw from the basin during normal and dry years or in an emergency (LADWP 2020).

LADWP plans to continue production from its groundwater basins in the coming years to offset reductions in imported supplies. Extraction from the basins is, however, limited by water quality and overdraft protection. Both LADWP and the California Department of Water Resources have programs in place to monitor wells to prevent over drafting.

In response to contamination issues and declining groundwater levels, the LADWP is working to clean up the San Fernando Basin's groundwater and is making investments to recharge local groundwater basins through stormwater recharge projects, while collaborating on the rehabilitation of aging stormwater capture and spreading facilities, with the long-range goal of increasing the contribution of groundwater to overall City water supplies.

Recycled Water

LADWP restores wastewater to a level of quality specified by the California Department of Health Services and distributes it for landscaping and industrial uses. The sustainability of the City's water supplies is dependent on the City's ability to maximize water conservation and increase recycled water use. LADWP uses recycled water produced by four wastewater treatment plants: Hyperion Treatment Plant, Terminal Island Water Reclamation Plant, Donald C. Tillman Water Reclamation Plant, and the Los Angeles-Glendale Water Reclamation Plant. Currently recycled water provides approximately 2 percent to the City's water supply. As part of LADWP's effort to maximize water reuse, it has partnered with other agencies to initiate the Operation NEXT Water Supply Program which seeks to strengthen the City' long-term resiliency and sustainability by maximizing water reuse from the HWRP (LADWP 2020).

Purchased Water

The remainder of the City's water demand (i.e., average of 41 percent) is supplied by purchases from MWD. The MWD imports its water supplies from Northern California through the State Water Project (SWP) and from the Colorado River by way of the MWD's Colorado River Aqueduct. LADWP is one of 26 member agencies that have preferential rights to purchase water from the MWD. LADWP has a preferential right to purchase water from the MWD pursuant to MWD Act Section 135.

Combined, LAA and purchased imported supplies from MWD make up on average approximately 90 percent of the City's total supplies. The City relies on the MWD even more in dry years and has increased its dependence in recent years as LAA supply has been reduced. Although the City plans to reduce its reliance on MWD supply, it has made significant investments in the MWD anticipating that the City will continue to rely on the wholesaler to meet its current and future supplemental water needs. The 2020 UWMP projects that LADWP's reliance on the MWD water supplies will be reduced significantly, from the five-year average of 42 percent of total demand to 31 percent under average weather conditions by 2045 (LADWP 2020).

Water Conservation

The City's water conservation measures include those accomplished through water metering, water rationing, public awareness and incentives, industrial process water use efficiency, and other policies, programs and ordinances. As a result of water conservation measures, including the first ever statewide mandatory water use restrictions in 2015, the City has reduced its water usage by 18 percent during fiscal years (FY) 2019/20 compared to FY 2013/2014. Single-family residential use decreased by 20 percent, multi-family residential use decreased by 11 percent, commercial use decreased by 23 percent, industrial use decreased by 33 percent, and government use decreased by 21 percent. Furthermore, state legislation, which postdates several City water conservation ordinances, has strengthened the City's commitment to water conservation and provides added assurance that the City will continue its leadership role in managing demand for water in the near and distant future. Conservation will continue to be an important part of maintaining long term water supply reliability and is a key component of LADWP's goals to reduce potable water use per capita by 25 percent by 2035 (LADWP 2020).

Water Facilities

As detailed in the LADWP's 2018-2019 Water Infrastructure Plan, water supply to the City is provided by LADWP's water infrastructure and conveyance system, which includes 6,780 miles of mainline pipelines, 560 miles of trunk lines, 123 tanks and reservoirs, 84 pumping stations, 24 chlorination stations, 331 regulator and relief stations, and 60,115 fire hydrants (LADWP 2019). These system components are described below:

- Distribution Mainlines: Distribution mainlines (pipes 20 inches or less in diameter) constitute the backbone of LADWP's water distribution system. There are approximately 6,780 miles of mainline throughout the City of Los Angeles. Over 28% (about 1,871 miles) of LADWP's mainlines are over 80 years old, while the average lifespan of an iron water main is about 100 years. LADWP has set goals to ramp up the replacement of water distribution mainline to bring the pipe replacement cycle closer to the expected pipe life cycle by 2023.
- Trunk Lines: Trunk lines (pipes greater than 20 inches in diameter) provide the transmission capacity to move large amounts of water around the city – from reservoirs and tanks to the smaller distribution mainlines. There are approximately 560 miles of transmission pipelines throughout the City. Prioritization for trunk line replacement is similar to the process for mainlines, taking into account leak history, soil conditions, and pipe age, along with other factors.
- Large Valves: LADWP has 2,806 large valves (16 to 144 inches or greater in diameter) in the water system network. Large valves are flow control devices that are critical for water system operations. Large valve replacement is based on operational needs. LADWP's goal has been to replace five large valves per year, based on results of the Large Valve Assessment Program. There are currently 23 valves identified for replacement. LADWP's plan is to continue with a targeted large valve replacement program that strategically prioritizes replacements of large valves in the water distribution system based on water shutdown and valve availability. As changes to the Water System are made, replacement priorities are adjusted.
- Water Meters. There are over 6,500 large meters (3 inches and larger) and approximately 700,000 small meters (2 inches and smaller) in the water distribution system. Accurate metering is necessary to fully account for water use by all customers as well as quantify water loss within the distribution system. LADWP has completed its cycle for large meter replacement, and is focused on replacing small meters, which constitute the vast majority of the Water System's meter inventory. The industry average life cycle of a small meter is 20 years, before wear and tear on its moving parts cause loss of measuring accuracy. Over the next five years, LADWP plans to ramp up to a replacement cycle of 20 years.
- In-City Reservoirs and Tanks. In the Los Angeles basin, LADWP operates eight major active reservoirs and 110 smaller storage facilities, all of which create operational flexibility to balance water supplies and customer demands. Eagle Rock, Elysian, Lower Franklin No. 2, Santa Ynez, and Lower Van Norman Bypass reservoirs are protected with a roof or floating membrane; Headworks East is a buried structure; Los Angeles Reservoir utilizes shade balls and ultraviolet disinfection; and a floating cover was installed at Upper Stone Canyon. A new buried reservoir, Headworks West, is currently in construction. The following six large reservoirs are no longer in service but contain water: Encino, Lower Hollywood, Upper Hollywood, Silver Lake, Lower Stone Canyon, and Ivanhoe Reservoir. Various levels of maintenance are necessary at these locations to allow for potential emergency use of

the water as well as limited public access. Similar to the in-city reservoirs, storage tanks provide the needed daily and emergency supplies for the community. Having capacity ranges from 9,000 gallons to 30 million gallons, the typical useful life for steel and concrete tanks is 60 years and 100 years, respectively.

Regulatory Framework

State

California Urban Water Management Plan

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 (afy) 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 centers or business establishments employing more than 1,000 persons or having more than 500,000 square feet of floor space;

- Commercial office buildings employing more than 1,000 persons or having more than 250,000 square feet of floor space;
- Hotels, motels, or both, having more than 500 rooms;
- Industrial, manufacturing, or processing plants, or industrial parks planned to house more than 1,000 persons, occupying more than 40 acres of land, or having more than 650,000 square feet of floor area
- Mixed-use projects that include one or more of the projects specified in this subdivision; or
- Projects that would demand an amount of water equivalent to or greater than the amount of water required by a 500-dwelling-unit project. (Water Code Section 912, CEQA Guidelines Section 15155(a).

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.[17] 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

[17] 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 September 2020.

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 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

SB X7-7 (Water Conservation Act of 2009), codified in 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.[18] Cumulative statewide savings from June 2015 through February 2017 were estimated at 22.5 percent.[19] 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.[20]

Sustainable Groundwater Management Act of 2014 [21]

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[22]. 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 and 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

[18] State Water Resources Control Board, Fact Sheet, February 2017 Statewide Conservation Data, updated April 4, 2017.
[19] 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.
[20] State Water Resources Control Board, Fact Sheet, August 2017 Statewide Conservation Data, updated October 3, 2017.
[21] Sustainable Groundwater Management Act [And Related Statutory Provisions from SB1168 (Pavley), AB1739 (Dickinson), and SB1319 (Pavley) as Chaptered], 2015 Amendments, effective January 1, 2016.
[22] California Department of Water Resources. SGMA Groundwater Management. https://water.ca.gov/Programs/Groundwater-Management/SGMA-Groundwater-Management. Accessed September 2020.

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.

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.[23]

CALGreen Code

Part 11 of Title 24, the title that regulates the design and construction of buildings, establishes the 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.

[23] California Code of Regulations, Title 20, Section 1605.3(h), p.306 https://govt.westlaw.com/calregs/Browse/Home/California/CaliforniaCodeofRegulations?transitionType=Default&contextData=%28sc.Default%29. Accessed September 2020.

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.[24] 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.

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.[25]

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.[26]

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

[24] State of California, Office of Governor Edmund G. Brown, Jr., Governor Brown Declares Drought State of Emergency, January 17, 2014, https://www.ca.gov/archive/gov39/2014/01/17/news18368/index.html. Accessed September 2020.

[25] State of California, Office of Governor Edmund G. Brown, Jr., Governor Brown Issues Order to Continue Water Savings as Drought Persists, May 9, 2016, https://www.ca.gov/archive/gov39/2016/05/09/news19408/index.html. Accessed September 2020.

[26] State of California Office of Administrative Law, Notice of Approval of Emergency Regulatory Action, State Water Resources Control Board, Title 23, May 31, 2016,https://www.waterboards.ca.gov/board_decisions/adopted_orders/resolutions/2016/rs2016_0029_with_adopted_regs.pdf. Accessed September 2020.

standards for urban water suppliers.[27,28] 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.[29] It provides a collaborative 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, DWR released the Final 2018 Update to the California Water Plan[30]. 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.[31]

[27] California State Water Resources Control Board, Emergency Conservation Regulation, 2017,https://www.waterboards.ca.gov/board_decisions/adopted_orders/resolutions/2016/rs2016_0029_with_adopted_regs.pdf. Accessed September 2020.
[28] State Water Resources Control Board, Resolution No. 2017-0024, https://www.waterboards.ca.gov/board_decisions/adopted_orders/resolutions/2017/rs2017_0024.pdf. Accessed September 2020.
[29] California Department of Water Resources, California Water Plan, https://water.ca.gov/Programs/ California-Water-Plan. Accessed September 2020.
[30] California Department of Water Resources, https://water.ca.gov/News/News-Releases/2019/July-19/Final-Water-Plan-Update-2018. Accessed September 2020.
[31] California Department of Water Resources, California Water Plan Update 2018, Executive Summary, pages ES-1 to ES-2,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 September 2020.

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.[32] 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.[33]

Regional

As discussed in detail below, the MWD is a primary source of water supply within Southern California. Based on the water supply planning requirements imposed on its member agencies and ultimate customers, MWD has adopted a series of official reports on the state of its water supplies. As described in further detail below, in response to recent developments in the Sacramento Delta, the MWD has developed plans intended to provide solutions that, when combined with the rest of its supply portfolio, will ensure a reliable long-term water supply for its member agencies, including the City of Los Angeles.

Metropolitan Water District's 2020 Urban Water Management Plan

The MWD 2020 UWMP , adopted in June 2021, addresses the future of MWD's water supplies and demand through the year 2045. Evaluations are prepared for average year conditions, single dry-year conditions, and multiple dry-year conditions. The analysis for multiple-dry year conditions, i.e. under the most challenging weather conditions such as drought and service interruptions caused by natural disasters, is presented in Table 7-4 of the 2020 UWMP. The analysis in the 2015 Regional UWMP concluded that reliable water resources would be available to continuously meet demand through 2045. In the 2020 UWMP, the projected 2045 demand water is 2,860,000 afy (MWD 2021).

In addition to the water reliability assessments, the plan includes an evaluation of frequent and severe periods of droughts, as described in the Drought Risk Assessment, and the preparation and adoption of the Water Shortage Contingency Plan (WSCP). In light of declining reservoir levels, the Lower Basin Drought Contingency Plan (DCP) was signed in 2019. This agreement incentivizes storage in Lake Mead and requires certain volumes of water be stored in Lake Mead under certain Lake Mead elevation levels through 2026. Metropolitan is to store certain volumes of water in Lake Mead as DCP ICS once Lake Mead is below elevation 1,045 feet. This agreement also increases Metropolitan's flexibility to take delivery of water stored as ICS at Lake Mead elevations below 1,075 feet. The goal of this agreement is to keep Lake

[32] California Natural Resources Agency, California Water Action Plan, http://resources.ca.gov/california_water_action_plan/. Accessed September 2020.
[33] California Natural Resources Agency, California Water Action Plan 2016 Update, pages 2 and 3, http://resources.ca.gov/docs/california_water_action_plan/Final_California_Water_Action_Plan.pdf. Accessed September 2020.

Mead above critical elevations, and overall, it increases Metropolitan's flexibility to store water in Lake Mead in greater volumes and to take delivery of stored water to fill the Colorado River Aqueduct as needed (MWD 2021).

MWD has also developed an Emergency Storage Requirement to mitigate against potential interruption in water supplies resulting from catastrophic occurrences within the Southern California region and is working with the State to implement a comprehensive improvement plan to address catastrophic occurrences that could occur outside of the Southern California region. MWD is also working with the State on the Delta Risk Management Strategy to reduce the impacts of a seismic event in the Delta that would cause levee failure and disruption of SWP deliveries. In addition, MWD has plans for supply implementation and continued development of a diversified resource mix, including programs in the Colorado River Aqueduct , SWP, Central Valley transfers, local resource projects, and in-region storage that enables the region to meet its water supply needs (MWD 2021).

MWD's 2015 Integrated Resources Plan

The MWD prepares an Integrated Water Resources Plan (IRP) that provides a water management framework with plans and programs for meeting future water needs. It addresses issues that can affect future water supply such as water quality, climate change, and regulatory and operational changes. The most recent IRP (2015 IRP) was adopted in January 2016.[34] It establishes a water supply reliability mission of providing its service area with an adequate and reliable supply of high-quality water to meet present and future needs in an environmentally and economically responsible way. Among other topics, the 2015 IRP discusses water conservation, local and imported water supplies, storage and transfers, water demand, and adaptation to drought conditions.

The 2015 IRP reliability targets identify developments in imported and local water supply, and in water conservation that, if successful, would provide a future without water shortages and mandatory restrictions under planned conditions. For imported supplies, MWD would make investments to maximize CRA deliveries in dry years. MWD would make ecologically-sound infrastructure investments to the SWP so that the water system can capture sufficient supplies to help meet average year demands and to refill the MWD storage network in above-average and wet years.

Planned actions to keep supplies and demands in balance include, among others, lowering regional residential per capita demand by 20 percent by the year 2020 (compared to a baseline established in 2009 state legislation), reducing water use from outdoor landscapes and advancing additional local supplies. IRP Table ES-1, 2015 IRP Update Total Level of Average-Year Supply Targeted (Acre-Feet), of the 2015 IRP,

[34] Metropolitan Water District of Southern California, Integrated Water Resources Plan, 2015 Update, Report No. 1518, January 2016, http://www.mwdh2o.com/PDF_About_Your_Water/2015%20IRP%20Update%20Report%20(web).pdf. Accessed September 2020.

shows the supply reliability and conservation targets. As presented in the IRP, the total supply reliability target for each five-year increase between 2016 and 2040 would exceed the retail demand after conservation. In 2040, retail demand after conservation is estimated to be 4,273,000 acre-feet and the total supply reliability target is approximately 4,539,000 acre-feet, representing an excess of 266,000 acre-feet.[35]

MWD's Water Surplus and Drought Management Plan

In 1999, MWD incorporated the water storage contingency analysis that is required as part of any UWMP into a separate, more detailed plan, called the Water Surplus and Drought Management Plan (WSDM Plan). The overall objective of the WSDM Plan is to ensure that shortage allocation of MWD's imported water supplies is not required. The WSDM Plan provides policy guidance to manage MWD's supplies and achieve the goals laid out in the agency's IRP. The WSDM Plan separates resource actions into two major categories: Surplus Actions and Shortage Actions. The WSDM Plan considers the region to be in surplus only after MWD has met all demands for water, including replenishment deliveries. The Surplus Actions store surplus water, first inside then outside of the region. The Shortage Actions of the WSDM are separated into three subcategories: Shortage, Severe Shortage, and Extreme Shortage. Each category has associated actions that could be taken as part of the response to prevailing shortage conditions. Conservation and water efficiency programs are part of MWD's resource management strategy through all categories.[36]

MWD's Water Supply Allocation Plan

While the WSDM Plan included a set of general actions and considerations for MWD staff to address during shortage conditions, it did not include a detailed water supply allocation plan or implementation approach. Therefore, in February 2008, MWD adopted a water supply plan called the Water Supply Allocation Plan (WSAP), which has since been implemented three times, most recently in April 2015 (under the new name Drought Rationing Plan). The WSAP includes a formula for determining equitable, needs-based reductions of water deliveries, with the potential application of a surcharge, to member agencies during extreme water shortages in MWD's service area conditions (i.e., drought conditions or unforeseen interruptions in water supplies).

The WSAP allows member agencies the flexibility to choose among various local supply and conservation strategies to help ensure that demands on MWD stay in balance with limited supplies. The WSAP formula addresses shortages of MWD supplies, by taking into account growth, local investments, changes in supply conditions and the demand hardening aspects of non-potable recycled water use and the implementation

[35] Metropolitan Water District of Southern California, Integrated Water Resources Plan – 2015 Update, Report 1518. page VIII, http://www.mwdh2o.com/PDF_About_Your_Water/2015%20IRP%20Update%20Report%20(web).pdf. Accessed September 2020.
[36] Water Surplus and Drought Management Plan, Report No. 1150. August 1999, http://www.mwdh2o.com/PDF_About_Your_Water/2.4_Water_Supply Drought Management Plan.pdf. Accessed September 2020.

of conservation savings programs.[37] The allocation period covers 12 consecutive months from July of a given year through the following June.

Local

Los Angeles Department of Water and Power's 2020 Urban Water Management Plan (UWMP)

In accordance with the California Urban Water Management Planning Act, UWMPs are updated at 5-year intervals. LADWP adopted the 2020 UWMP on May 25, 2021. The 2020 UWMP complies with the Urban Water Management Planning Act, builds upon the goals and progress made in the 2015 UWMP and currently serves as the City's master plan for reliable water supply and resource management consistent with the City goals and objectives. The UWMP details LADWP's efforts to promote the efficient use and management of its water resources. LADWP's UWMP used a service area-wide methodology in developing its water demand projections. This methodology does not rely on individual development demands to determine area-wide growth. Rather, the projected growth in water use for the entire service area was considered in developing long-term water projections for the City to the year 2045. Long range projections are based on SCAG growth projections. The 2020 UWMP is based on projections in the 2020-2045 RTP/SCS.

The 2020 UWMP takes into account a number of significant changes that have occurred since LADWP prepared its 2015 UWMP.[38] The year 2012 marked the beginning of the current multi-year drought in California. As stated above, in January 2014, Governor Brown proclaimed a drought state of emergency. In July 2014, the SWRCB implemented its Emergency Water Conservation Regulation (Emergency Regulation), as directed by Governor Brown, to take actions to reduce water use by 20 percent statewide. Later, the mandated reductions were increased to 25 percent statewide, with adjustments to account for different climates, expected growth, investment made to create drought-resilient water supplies by different cities through October 2016. In October 2014, Mayor Eric Garcetti issued Executive Directive No. 5 (ED5) Emergency Drought Response which set goals to reduce per capita water use, reduce purchases of imported potable water by 50 percent, and create an integrated water strategy to increase local supplies and improve water security considering climate change and seismic vulnerability. Lastly, in April 2015, the Mayor's Sustainable City pLAn, (updated in 2019 as the City's Green New Deal and discussed further below), was released establishing targets for the City over the next 20 years to strengthen and promote sustainability. The 2020 UWMP incorporates the objectives of these recent initiatives. As a result of water conservation measures, including the first ever statewide mandatory water use restrictions implemented by 2015, the City has reduced its water usage by 18 percent during FY 2019/20 compared to FY 2013/2014.

[37] Metropolitan water District, 2015 Urban Water Management Plan, page 2-21. http://www.mwdh2o.com/PDF_About_Your_Water/2.4.2_Regional_Urban_Water_Management_Plan.pdf. Accessed September 2020.
[38] Los Angeles Department of Water and Power, Water Supply Assessment, page 11.

Single-family residential use decreased by 20 percent, multi-family residential use decreased by 11 percent, commercial use decreased by 23 percent, industrial use decreased by 33 percent, and government use decreased by 21 percent (LADWP 2020). [39]

The LADWP is committed to meeting all the City's current and future water needs while increasing supply reliability, reducing imported water purchases, and increasing locally produced water by continuing with the strategy to (LADWP 2020):

- Achieve significant water conservation and water use efficiency enhancements
- Increase stormwater capture capacity
- Maximize water reuse
- Maximize and expand groundwater production
- Maintain and increase operational integrity of the LAA and in-City water distribution systems
- Ensure continued reliability of the water supplies from the MWD through active representation of the City's interests on the MWD Board
- Meet or exceed all federal and State standards for drinking water quality

Green New Deal

The City released the first Sustainable City pLAn in April 2015,[40] which has been updated in 2019 as the City's Green New Deal. The Green New Deal includes a multi-faceted approach to developing a locally sustainable water supply to reduce reliance on imported water, reducing water use through conservation, and increasing local water supply and availability.

One Water LA 2040 Plan

In April 2018, the City prepared the One Water LA 2040 Plan (One Water LA Plan), an integrated approach to Citywide recycled water supply, wastewater treatment, and stormwater management.[41] The new plan builds upon the City's Water IRP, which projected needs and set forth improvements and upgrades to wastewater conveyance systems, recycled water systems, and runoff management programs through the year 2020, and extends its planning horizon to 2040. The One Water LA Plan proposes a collaborative approach to managing the City's future water, wastewater treatment, and stormwater needs with the goal of yielding sustainable, long-term water supplies for Los Angeles to ensure greater resilience to drought

[39] Los Angeles Department of Water and Power, Water Supply Assessment, page 12.

[40] City of Los Angeles, Sustainable City pLAn, 2015, https://www.lacity.org/highlights/sustainable-city-plan. Accessed September 2020.

[41] City of Los Angeles, One Water LA 2040 Plan, Volume 1, Summary Report, April 2018, https://www.lacitysan.org/cs/groups/sg_owla/documents/document/y250/mdi2/~edisp/cnt026188.pdf. Accessed September 2020.

conditions and climate change. The One Water LA Plan is also intended as a step toward meeting the Mayor's Executive Directive to reduce the City's purchase of imported water by 50 percent by 2024.[42] Major challenges addressed in the One Water LA Plan include recurring drought, climate change, and the availability of recycled water in the future in light of declining wastewater volumes.

City of Los Angeles General Plan

General Plan Framework Element

The Citywide General Plan Framework Element (General Plan Framework) establishes the conceptual basis for the City's General Plan.[43] The General Plan Framework sets forth a comprehensive Citywide long-range growth strategy and defines Citywide policies regarding land use, housing, urban form and neighborhood design, open space and conservation, economic development, transportation, infrastructure and public services. Chapter 9, Infrastructure and Public Services, of the City's General Plan Framework identifies goals, objectives, and policies for City utilities including water service. Goal 9C is to provide adequate water supply, storage facilities, and delivery system to serve the needs of existing and future water needs.[44] The goals, objectives and policies are addressed by the City in its ordinances and preparation of its UWMP.

Table 4.16-3 summarizes the General Plan goals, objectives and policies related to water supply:

[42] City of Los Angeles, Office of the Mayor, Executive Directive No. 5, Emergency Drought Response - Creating a Water Wise City, October 14, 2014, https://www.lamayor.org/sites/g/files/wph446/f/page/file/ED_5_-_Emergency_Drought__Response_-_Creating_a_Water_Wise_City.pdf?1426620015. Accessed September 2020.
[43] City of Los Angeles Department of City Planning, Citywide General Plan Framework, An Element of the Los Angeles General Plan, July 27, 1995, https://planning.lacity.org/odocument/c9dd48c1-d9ed-4569-a448-74216c30cfe1/Infastructure_Systems.pdf. Accessed September 2020.
[44] City of Los Angeles, General Plan Framework Element, Chapter 9: Infrastructure and Public Services – Water Supply.

Table 4.16-3 General Plan – Goals, Objectives and Policies Associated with Water Supply

Framework Element – Chapter 9 Infrastructure and Public Services	
Goal 9C	Adequate water supply, storage facilities, and delivery system to serve the needs of existing and future residents and businesses.
Objective 9.1	Monitor and forecast demand based upon actual and predicted growth.
Objective 9.8	Monitor and forecast water demand based upon actual and predicted growth.
Policy 9.8.1	Monitor water usage and population and job forecast to project future water needs.
Objective 9.9	Manage and expand the City's water resources, storage facilities, and water lines to accommodate projected population increases and new or expanded industries and businesses.
Policy 9.9.1	Pursue all economically efficient water conservation measures at the local and statewide level.
Policy 9.9.7	Incorporate water conservation practices in the design of new projects so as not to impede the City's ability to supply water to its other users or overdraft its groundwater basins.
Objective 9.10	Ensure that water supply, storage, and delivery systems are adequate to support planned development.
Policy 9.10.1	Evaluate the water system's capability to meet water demand resulting from the Framework Element's land use patterns.
Policy 9.10.2	Solicit public involvement, when appropriate, in evaluating options for the construction of new and/or expansion of existing water facilities.
Objective 9.11	Ensure, to the maximum extent possible, the continued provision of water capacity, quality and delivery after an earthquake or other emergency.
Policy 9.11.1	Provide for the prompt resumption of water service with adequate quantity and quality of water after an emergency.
Source: City of Los Angeles, *City of Los Angeles General Plan*, *Framework Element*, re-adopted 2001.	

Community Plans

The Land Use Element of the City's General Plan includes 35 community plans. Community plans are intended to provide an official guide for future development and propose approximate locations and dimensions for land use. The community plans establish standards and criteria for the development of housing, commercial uses, and industrial uses, as well as circulation and service systems. The community plans implement the City's General Plan Framework at the local level and consist of both text and an accompanying generalized land use map. The community plans' texts express goals, objectives, policies, and programs to address growth in the community, including those that relate to utilities and service systems required to support such growth. The community plans' maps depict the desired arrangement of land uses as well as street classifications and the locations and characteristics of public service facilities.

Los Angeles Municipal Code

The City has adopted several ordinances, later codified in the LAMC, in an effort to reduce water consumption. A summary of the City's key regulations regarding water conservation is provided below.

- Ordinance Nos. 166,080, 181,288, 183,608, and 184,250—amending LAMC Chapter XII, Article 1 to clarify prohibited uses of water and modify certain water conservation requirements of the City's Emergency Water Conservation Plan. The City's Emergency Water Conservation Plan sets forth six different phases of water conservation, which shall be implemented based on water conditions. As part of these requirements, watering is limited to specific days and hours. In determining which phase of water conservation shall be implemented, LADWP monitors and evaluates the projected water supply and demand. In addition, the Emergency Water Conservation Plan includes penalties for those that violate its requirements.
- Ordinance No. 180,822—amended LAMC Chapter XII, Article 5 to establish water efficiency requirements for new development and renovation of existing buildings, and mandate installation of high efficiency plumbing fixtures in residential and commercial buildings.
- Ordinance No. 181,480—amended LAMC Chapter IX by adding Article 9 (Green Building Code) to the LAMC to incorporate various provisions of the California Green Building Standards Code. This ordinance added mandatory measures for newly constructed low-rise residential and non-residential buildings to reduce indoor water use by at least 20 percent by: (1) using water saving fixtures or flow restrictions; and/or (2) demonstrating a 20percent reduction in baseline water use.
- Ordinance Nos. 181,899 and 183,833—amended LAMC Chapter VI, Article 4.4, Section 64.72 regarding stormwater and urban runoff to include new requirements, including LID requirements that promote water conservation.
- Ordinance No. 182,849—amended LAMC Chapter IX, Article 9 (Green Building Code) to mandate that for new water service or for additions or alterations requiring upgraded water service for landscaped areas of at least 1,000 square feet, separate sub-meters or metering devices shall be installed for outdoor potable water use. This ordinance also required that for new non-residential construction with at least 1,000 square feet of cumulative landscaped area, weather or soil moisture–based irrigation controllers and sensors be installed.
- Ordinance No. 184,692—amended LAMC Chapter IX, Article 4 (Plumbing Code) by adopting by reference various sections of the California Plumbing Code. This ordinance also added requirements for plumbing fixtures and fixture fitting.
- Ordinance No. 184,248—amended LAMC Chapter IX, Article 4 (Plumbing Code) and Article 9 (Green Building Code) to establish citywide water efficiency standards and mandate a number of new fixture requirements and methods of construction for plumbing and irrigation systems.

The City of Los Angeles also has adopted numerous requirements related to the provision of water for purposes of fire protection. These requirements are set forth in the Fire Code (LAMC Chapter V, Article 7). LAMC Section 57.507.3.1 establishes fire water flow standards. Fire water flow requirements, as

determined by the Los Angeles Fire Department (LAFD), vary by project site as they are dependent on land use (e.g., higher intensity land uses require higher flow from a greater number of hydrants), life hazard, occupancy, and fire hazard level. As set forth in LAMC Section 57.507.3.1, fire water flow requirements vary from 2,000 gpm in low density residential areas to 12,000 gpm in high density commercial or industrial areas. A minimum residual water pressure of 20 pounds psi is to remain in the water system with the required gpm flowing. As set forth in LAMC Section 57.507.3.1, Industrial and Commercial land uses (which the LAFD has classified the Project as) have a minimum required fire flow of 6,000 gpm to 9,000 gpm from four to six adjacent hydrants flowing simultaneously with a residual pressure of 20 psi unless otherwise determined by LAFD. LAMC Section 57.507.3.2 also addresses land use-based requirements for fire hydrant spacing and type. Land uses in the Industrial and Commercial category require one hydrant per 80,000 square feet of land with 300-foot distances between hydrants, and 2.5 inch by 4 inch double fire hydrants or 4-inch by 4-inch double fire hydrants. Regardless of land use, every first story of a residential, commercial, and industrial building must be within 300 feet of an approved hydrant.

Los Angeles Water Rate Ordinance

The City's Water Rate Ordinance was adopted in June 1995 and last amended by the City's Board of Water and Power Commissioners pursuant to Ordinance No. 184,130. Effective since April 15, 2016, this City Water Rate Ordinance restructured water rates to help further promote conservation. Specifically, the goal of the ordinance is to incentivize water conservation while recovering the higher costs of providing water to high volume users and accelerating development of sustainable local water supply. Tiered water rate schedules were established for: single-dwelling unit customers; multi-dwelling unit customers; commercial, industrial, and governmental customers and temporary construction; recycled water service; private water service; publicly sponsored irrigation, recreational, agricultural, horticultural, and floricultural uses, community gardens and youth sports. The new water rate structure increases the number of tiers from two to four for single-dwelling unit customers. In addition, this ordinance intends to maintain cost-of-service principles, incremental tier pricing based on the cost of water supply and added pumping and storage costs.

Environmental Impacts

Thresholds of Significance

The following thresholds of significance were developed in accordance with CEQA Guidelines Appendix G. Impacts would be significant if:

- **Threshold 4.16-4:** Development accommodated under the Housing Element Update would 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

- **Threshold 4.16-5:** The City would not have sufficient water supplies available to serve growth accommodated under the Housing Element Update during normal, dry and multiple dry years?

Methodology

For purposes of Threshold 4.16-4, the Housing Element Update would have a significant impact if it resulted in the relocation or construction of water facilities and that relocation or construction caused a significant environmental effect, such as the demolition of a historical resource or destruction of a unique archaeological resource. Under this threshold, not having adequate facilities to serve the project is not in and of itself a significant impact. Rather the question is whether construction of needed facilities results in environmental impacts. Therefore, analysis involves a two-part inquiry: first, whether the build out of the RHNA under Housing Element Update can be served by existing water facilities or if it is reasonably anticipated to cause the need for new or relocated water facilities; and second, if it will need new or relocated water facilities, whether it is reasonably anticipated that construction or relocation of such facilities will result in a significant environmental impact.

For purposes of Threshold 4.16-5, the Housing Element Update would have a significant impact if the City did not have adequate water supply to serve the build out of the RHNA during normal, dry and multiple dry years.

To determine demand on water facilities and water supply for Thresholds 4.16-4 and 4.16-5, demand from build out of the RHNA is determined based on the physical connection of 420,327 housing units to the City's potable water supply system, and applicable utility rates per type of housing unit included in the LADWP 2020 UWMP. Long range water demand forecasts in the 2020 UWMP are based on SCAG growth projections for the 2020-2045 RTP/SCS, which projects increases in housing to address the housing shortage in Southern California and a related reduction in persons per household. Therefore, per the 2020 UWMP, per unit water demand is forecast to decline over time. This is consistent with RHNA assumptions, in which full build-out of the RHNA units would foreseeably reduce the average utility rate per housing unit.

Regulatory Compliance Measures

The City has established numerous regulatory requirements related to reducing water consumption as discussed in the regulatory setting. Furthermore, refer to Section 4.6, *Hydrology and Water Quality*, of this EIR for a detailed discussion of the Proposed Project in relation to the City's LID requirements and BMPs. Among other requirements, future housing development under the Housing Element Update would be required to comply with the following RCMs:

- **RCM-UTIL-1 (Fire Water Flow):** The project applicant shall consult with the LADBS and LAFD to determine fire flow requirements for a proposed project and will contact a Water Service Representative at the LADWP to order a service advisory request (SAR). This system hydraulic analysis will determine if existing LADWP water supply facilities can provide the proposed fire flow requirements of a project. If water main or infrastructure upgrades are required, the applicant would pay for such upgrades, which would be constructed by either the applicant or LADWP.
- **RCM-UTIL-2 (Green Building Code):** The project shall implement all applicable mandatory measures within the LA Green Building Code that would have the effect of reducing the project's water and energy use.
- **RCM-UTIL-3 (Landscape):** The project shall comply with Ordinance No. 170,978 (Water Management Ordinance), which imposes numerous water conservation measures in landscape, installation, and maintenance (e.g., use drip irrigation and soak hoses in lieu of sprinklers to lower the amount of water lost to evaporation and overspray, set automatic sprinkler systems to irrigate during the early morning or evening hours to minimize water loss due to evaporation, and water less in the cooler months and during the rainy season).

Project Impacts and Mitigation Measures

Threshold 4.16-4	Would development accommodated under the Housing Element Update 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?
Threshold 4.16-5:	Would the City would have sufficient water supplies available to serve development accommodated under the Housing Element Update during normal, dry and multiple dry years?

Impact 4.16-4 Implementation of the Housing Element Update may require minor new or expanded water line upgrades to serve residential developments. However, the environmental impacts associated with the construction or relocation of potentially required new or expanded water facilities would be ***less than significant.***

Impact 4.16-5 The City would have sufficient water supplies available to serve build out of the RHNA under the Housing Element Update during normal, dry and multiple dry years. The impact to water supply would be ***less than significant***.

Water Supply

Per the LADWP 2020 UWMP, current water supplies, planned future water conservation efforts, and planned future water supplies will enable LADWP to reliably provide water that meets the demands of the City for a 25-year planning horizon (through 2045). The 2020 UWMP indicates that water deliveries to the City totaled an average of 495,688 afy between the years 2016 and 2020. Projected total water demand for the City under a single dry year condition for year 2030 is 693,200 afy. Projected total water demand for the City under average year conditions for year 2030 is 660,200 afy. Projected total water demand for the City for year 2030 under multiple dry years conditions is 675,800 afy.

Table 4.16-4 summarizes estimated water demand for the City with implementation of the Housing Element Update. Total water demand associated with housing development under the Housing Element Update would be approximately 90 million gpd, or approximately 101,000 afy. Therefore, development forecast through 2029 would result in an approximately 20 percent increase above the current average demand of 495,688 afy for the year 2020, resulting in an estimated demand of 597,000 afy. Nonetheless, according to the UWMP, the LADWP is projected to meet citywide water demand through 2025 and 2040. Assuming an average year in 2030, the LADWP is projected to supply 693,200 afy, which would accommodate the citywide estimated water demand of 597,000 afy with implementation of the Housing Element Update.

Table 4.16-4 Estimated Water Demand Compared to Water Supply

Land Use	Dwelling Units or Jobs in Plan Area	Daily Water Use Rate (gpd/unit)	Daily Water Demand (gpd)	Annual Water Demand (afy)
Single-family Residential	76,920 du	326	25,075,920	28,088
Multi-family Residential	343,407 du	189	64,903,923	72,702
Total 2029 Housing Element Update Water Demand			89,979,843	100,992
Current Citywide Water Demand (Year 2020)				495,668
Total Water Demand (Citywide + 2029 Housing Element Update)				**596,660**
Projected Year 2030 Water Supply				**693,200**

Water demand numbers are rounded to the nearest thousand. Totals may not add up due to rounding.

du – dwelling unit

gpd – gallons per day

afy – acre feet per year (1 af = 325,850 gallons)

Source: Water demand rates were obtained from the LADWP's 2020 UWMP, Exhibit 2L. Per the 2020 UWMP, per unit water demand is forecast to decline over time; the forecast 2030 rates are assumed to apply to new development.

The projected net increase in water demand of 101,992 afy generated by new development under the Housing Element Update that will accommodate forecasted growth would represent about 51 percent of the forecasted water demand increase of 197,532 afy between 2020 and 2040. Because adequate supply would be available to meet estimated demand of the Housing Element Update during average, single dry year, and multiple dry year conditions through 2030, impacts would be ***less than significant***.

Water Facilities

Housing development accommodated under the Housing Element Update could require construction of new or expanded water distribution lines or facilities in areas where existing infrastructure is inadequate. LADWP installs and maintains the water distribution system. As discussed in the setting above, the 2018-2019 LADWP Water Infrastructure Plan establishes goals and targets for replacing and/or upgrading infrastructure. Through infrastructure projects, the LADWP would replace or upgrade major system components that are outdated or malfunctioning. With approximately 7,200 miles of water pipes citywide, LADWP plans to replace approximately 500 miles in the next 10 years giving the highest priority to pipes with high risk of failure. Construction impacts associated with the installation of water distribution lines would primarily involve trenching in order to place the water distribution lines below surface and would be limited to on-site water distribution lines and minor off-site work associated with connections to the public main. Such upgrades would likely occur within existing utility easements and would not result in new areas of disturbance. However, prior to ground disturbance, a project contractor would have to coordinate with LADWP to identify the locations and depth of all lines. During construction activities, emergency access to a project site, as well as existing vehicular and non-vehicular traffic flow would be preserved by a construction management plan that would be approved by the City for the project. Further, LADWP would be notified in advance of proposed ground disturbance activities to avoid water lines and disruption of water service.

Under RCM-UTIL-1, a system analysis may be required for individual projects to determine whether existing LADWP water supply facilities can provide the proposed fire flow requirements. The City would require that localized system deficiencies are adequately addressed by the responsible project and any future upgrades would be designed in accordance with applicable provisions of the LAMC and to the satisfaction of the City Engineer. In addition, the City requires applicants to coordinate with the LAFD and Building and Safety Department to ensure that existing and/or planned fire hydrants are capable of meeting fire flow demand/pressure requirements. The issuance of building permits is dependent upon submission, review, approval, and testing of fire flow demand and pressure requirements, as established by the LAFD and Building Safety Department prior to occupancy.

Based on the above, and similar to construction of wastewater facilities discussed in Threshold 4.16-1, replacement or construction of water facilities to serve housing development projects would be anticipated to be less than significant. Construction or relocation would occur in public easements that have been previously disturbed. Historically, such projects are approved with exemptions or negative declarations. Impacts from unusual site-specific conditions would be speculative. Additionally, environmental review would be prepared before any such infrastructure project would be undertaken.

The types of housing units accommodated under the Housing Element Update would generally fall into five categories of development projects. A review of the housing development in the City in Table 4-2 shows that water impacts for water supplies and construction of facilities were less than significant for each of the 54 developments reviewed and that no mitigation was required, even projects exceeding 1,000 new housing units.

- **Multi-family residential:** Multi-family residential projects may range in size from small apartment buildings with 2-10 units to larger apartment buildings and high-rise structures with hundreds of units. Multi-family developments of any size would require additional water supply. Multi-family residential projects would likely occur as infill development and are expected to be located in the High and Highest Resource Tracts, as shown in Figure 3-5, as well as in areas where larger multifamily development is allowed today, such as Regional Centers and around transit. For example, the Hollywood Center EIR analyzed the water supply impacts for 1,005 multi-family residential units. The EIR provided the following analysis and impact conclusion for this impact:

  As stated under Threshold (a), water would be required for Project construction activities, such as dust control, cleaning of equipment, excavation/export, removal and recompaction, and other related activities. Construction activities would be intermittent, with demand for water consumption variable but generally temporary in nature. As stated above and in the Utility Technical Report, based on a review of construction projects of similar size and duration, a conservative estimate of construction water demand would be approximately 1,000 to 2,000 gpd over the duration of construction. 61,62 Construction water use of approximately 2,000 gpd would be substantially less than the Project's approved water consumption during long-term operation (as explained below). Considering temporary construction water use would be substantially less than the approved water consumption at the Project Site, there would be sufficient water supplies available to serve the Project Site during construction. Furthermore, as described further below, the approved WSA for the Hollywood Center Project determined that adequate water supplies exist to meet the Project's projected water demand between 2015 and 2040, in addition to the existing and planned future demands for normal, single-dry, and multiple-dry years on LADWP. As Project construction would require a nominal amount of water compared to Project operation, and construction would be completed by 2025 if construction of the East and West Sites overlapped or by 2027 if construction did not overlap, the Project's

intermittent construction-related water demand can be met by LADWP's available water supplies during each year of construction through 2040. For these reasons, adequate water supplies would be available from existing entitlements and resources for Project construction activities. Therefore, LADWP has sufficient water supplies to serve the Project and the Project with the East Site Hotel Option and reasonably foreseeable future development during normal, dry, and multiple-dry years, and impacts on water supply during construction would be less than significant.

[…]

As indicated in Table IV.N.2-3, the Project would result in a total increase in domestic water demand of an estimated 163,098 gpd or 182.71 afy. This estimate takes into account regulatory required water conservation features and the additional water conservation features of the Project in the approved WSA for the Hollywood Center Project (e.g., Project Design Feature WS-PDF-1), which together would account for 39.0 percent of the base demand of 267,508 gpd.

Sufficient domestic water supplies are available to service the Project and the Project with the East Site Hotel Option and reasonably foreseeable future development during normal, dry and multiple dry years. Therefore, operational impacts on water supply would be less than significant.

- **Single-family residential:** Single-family residential projects may range in size and scale from smaller or larger single-family homes to small-lot subdivisions and multi-property single-family subdivisions. Single-family developments of any size would increase the use of existing wastewater facilities. Small single-family projects, such as small subdivisions with few net new homes, would be likely to occur in residential areas throughout the City and would not result in a substantial increase in water use in a neighborhood. Larger single-family projects, such as small lot subdivisions, could be built throughout the City, but would be more likely to occur as infill development in more urbanized areas of the City, including areas near public transit. It is possible that these types of developments, large single-family projects, could occur anywhere they are currently allowed as a result of zoning. Should these developments occur in areas outside the existing urban development area, new water supply infrastructure would be required which could have environmental impacts. However, these infrastructure requirements would most likely be located in the roadways, which may result in temporary impacts associated with construction that would not be significant.
- **ADUs:** ADUs include attached ADUs created through a building addition or conversion of existing floor area and detached ADUs of various scales, which are allowed in any zone that allows for residential use as well as on any site that contains an existing residential use. An ADU would result in one or more additional units on a property containing existing or proposed residential uses, which would not substantially increase the water use in an area and would not require new infrastructure; therefore, impacts would be less than significant.

- **Mixed use development:** Mixed use development could range in size and scale from neighborhood commercial mixed use with smaller nonresidential uses, to high-rise mixed use with larger nonresidential uses. Mixed Use developments are generally located in urbanized areas with existing stormwater infrastructure. These areas would include areas zoned for multifamily residential or mixed use development that are located near transit and in Regional Centers. Additional mixed use developments of varying scales could also be located in the High and Highest Resource Tracts shown in Figure 3-5, as a result of the Rezoning Program. Developers would be required to supply will-serve letters for projects and comply with LID requirements for stormwater runoff. For example, the Sunset and Gordon EIR analyzes a proposed multi-family mixed use development with 311 multifamily housing units for water supply impacts. The EIR provided the following analysis and impact conclusion for this impact:

  Similar to the CRA Approved Project, the Modified Project is also served by sufficient water conveyance infrastructure as the infrastructure in the vicinity of the Project Site has not substantially changed since the Certified EIR. Because the Modified Project's additional construction period would involve minimal water demand associated with new concrete mix where foundations are modified and power-spray cleaning within the parking garage, the Modified Project's water demand during the additional construction period would be accommodated by the water conveyance infrastructure. Further, because the earthwork activities would involve only minimal excavations within the interior of the parking garage for foundation upgrades, it is not anticipated that much, if any water will be needed for dust suppression. Thus, the water demand during the additional construction period for the Modified Project would not result in a substantial increase to the water demand for construction of the CRA Approved Project. Therefore, consistent with the analysis in the Certified EIR for the CRA Approved Project, the Modified Project's construction would not require the construction of new water treatment facilities or storm water drainage facilities and sufficient water supplies are available to serve the Modified Project from existing entitlements and resources during construction. Accordingly, the Modified Project would result in a less than significant impact with respect to water resources and/or water conveyance infrastructure for construction. Accordingly, as compared to the CRA Approved Project, the proposed Modified Project would not involve new significant environmental effects or a substantial increase in the severity of previously identified significant effects related to water resources/water conveyance infrastructure for construction.

  […]

  The Certified EIR stated the CRA Approved Project's water consumption (quantity, size, and type of infrastructure) would be determined by the CRA Approved Project Applicant's Engineering consultants based on the Los Angeles Department of Building and Safety and applicable building code requirements. The Certified EIR also explained that the on-site (sprinkler system and private fire hydrants) and off-site (public fire hydrants) fire flow demands would be determined based on the Los Angeles City Fire Department

(LAFD) and applicable building code requirements. Specific fire flow tests are typically conducted during the civil engineering review phase of the project, after project approval. Finally, the Certified EIR stated once a determination of the project's domestic and fire demands has been made, LADWP would assess the need for additional facilities. During construction of the vacant 22-story, approximately 250 foot high mixed use building and closed approximately 18,962 square foot public park on the Project Site, a new fire hydrant was installed on Sunset Boulevard as required by the LAFD. Similar to the CRA Approved Project, final fire flow requirements for the Modified Project would be verified during the review and approval process for the Modified Project before a certificate of occupancy is issued. Overall, the Modified Project would be expected to follow the same process of water demand and need as the CRA Approved Project. However, it is not expected that any further improvements or additional facilities to the water system serving the Project Site or surrounding area would be needed for the Modified Project because it is expected that all required improvements to the water system, including the installation of a new fire hydrant on Sunset Boulevard, were previously conducted during construction of the vacant building and closed public park on the Project Site. The modifications required for the Modified Project are not expected to require any additional water conveyance infrastructure, including water facilities and storm water drainage facilities, during operation from that which was necessary for the CRA Approved Project. Therefore, impacts to water conveyance infrastructure during the operation of the Modified Project would be less than significant. Accordingly, as compared to the CRA Approved Project, the proposed Modified Project would not involve new significant environmental effects or a substantial increase in the severity of previously identified significant effects related to water conveyance infrastructure during operation.

[…]

Since the water demands of the Modified Project are within the LADWP's 25-year water demand growth projected in the 2015 UWMP, and water supplies projected in the 2015 UWMP are considered to be reliable, the Modified Project's water demand would be consistent with the conclusion for the CRA Approved Project in the Certified EIR and would not substantially increase the water demand impacts identified in the Certified EIR for the CRA Approved Project. Although water supplies are currently available and adequate to serve the needs of the Modified Project, several factors affect the long-term availability of projected water supplies for the City of Los Angeles as a whole. As such, the City of Los Angeles imposes water conservation mitigation measures for all projects within its jurisdiction (identified under the "Regulatory Compliance Measures" subheading, below).

[…]

With implementation of the regulatory compliance measures CM I.1-1, CM I.1-2, Certified EIR Code-Required Measure I.1-1, and Certified EIR Code-Required Measure I.1-2, below, the Modified Project's impact upon water demands within the LADWP service area would be less than significant, which is consistent with the analysis in the Certified EIR for the CRA Approved Project. Moreover, the estimated

water demands associated with the Modified Project during operation are less than the estimated water demands associated with operation of the CRA Approved Project. Therefore, sufficient water supplies are available to serve the Modified Project from existing entitlements and resources. Accordingly, as compared to the CRA Approved Project, the proposed Modified Project would not involve new significant environmental effects or a substantial increase in the severity of previously identified significant effects related to water demands during operation.

- **Conversion and/or rehabilitation:** Existing nonresidential, residential, and mixed use structures could be converted or rehabilitated for new residential uses in areas throughout the City. The conversion or rehabilitation of existing properties would not involve new construction but may result in full-time residents in structures that were previously not occupied by residents in the building. An increase in residents would be minimal under small conversion projects (approximately 2-10 units), but could involve large buildings with hundreds of units. Whether a small and larger conversion/rehabilitation project, such a project would be limited by site specifics (e.g., area of the site, existing building configuration) and City development standards. Therefore, a conversion/rehabilitation project is not anticipated to result in a substantial increase in water demand above what is currently on the site. To the extent that a conversion or rehabilitation project does involve new construction, the impacts from that construction would be similar to those explained above for mixed-use and/or multi-family residential development. For example, the Crossroads Hollywood Project, as listed in Table 4-2, is a mixed use project that involves both new construction and rehabilitation of the Crossroads of the World and the former Hollywood Reporter Building. The entire project includes 950 residential units with hotel, commercial/retail, office, entertainment, and restaurant uses. The EIR for this project stated that potential impacts to water supply would less than significant due to the capacity of the infrastructure in the area and that fire flow to the buildings would be required to meet City fire flow requirements. Additionally, the water supply report prepared for the project found that there were sufficient water supplies to meet the demand of the project.

None of the environmental assessments for housing reviewed for this EIR identified significant unavoidable impacts to water supply or the need for mitigation (see Table 4-2).

Based on all of the above, impacts to both water supply and water infrastructure would be ***less than significant.***

Mitigation Measures

No significant impact would occur; therefore, mitigation is not required for housing development accommodated under the Housing Element Update.

4.16.3. ELECTRICITY, NATURAL GAS, AND TELECOMMUNICATIONS

Environmental Setting

Electricity

In 2019, the most recent year with available data, LADWP's electricity generation and distribution infrastructure delivered approximately 22,000 gigawatt hours (GWh) million megawatt hours (MWh) of electricity to its 1.4 million residential and business customers. Residential customers consumed approximately 7,400 GWh, or 34 percent, of electricity supplied by the LADWP in 2019. Business and industry consume about 65 percent of the electricity in Los Angeles, but residents constitute the largest number of customers. In addition to serving these consumers, the LADWP lights public streets and highways, powers part of the City's water system, and sells electricity to other utilities (California Energy Commission [CEC] 2019a).

LADWP generates power from a variety of different sources that include approximately 27 percent natural gas, 21 percent coal, 34 percent renewables, 14 percent nuclear, and four percent hydroelectric (LADWP 2019). LADWP utilizes renewable energy sources and has met the requirement of the Renewable Portfolio Standard (RPS) Enforcement Program to use at least 33 percent of the City's energy from renewables by 2020. Eligible renewable resources include biodiesel, biomass, hydroelectricity and small hydro, Los Angeles Aqueduct hydro power plants, digester gas, fuel cells, geothermal, landfill gas, municipal solid waste, ocean thermal, ocean wave, and tidal current technologies, renewable derived biogas, multi-fuel facilities using renewable fuels, solar photovoltaic, solar thermal electric, wind, and other renewables. LADWP provides electricity service to over 3.9 million residents in its service area, encompassing the City and parts of the Owens Valley (LADWP 2013b). LADWP has over 7,460 megawatts (MW) of generation capacity from a diverse mix of energy sources. Its distribution network includes 23 generation plants, 15,452 transmission towers, 6,800 miles of overhead distribution lines, nearly 3,600 miles of underground distribution cables, 160 distributing stations, 21 receiving stations, and over 50,000 substructures (LADWP 2017; LADWP 2019). As the largest municipal electric utility in the nation, the LADWP's Power System is vertically integrated—the LADWP both owns and operates the majority of its generation, transmission, and distribution systems. To improve system reliability and to ensure that power supplies continue to meet the City's needs for the next 100 years, the LADWP is spearheading an aggressive program to enhance generation capacity, modernize transmission and distribution infrastructure, assure power quality, and identify cost-saving, environmentally sensitive efficiencies (LADWP 2020).

The LADWP has prepared guidance plans to better align with statewide greenhouse gas (GHG) emissions goals and align with the City's 100% clean energy initiative. The Power Integrated Resource Plan (IRP) was expanded into the Power Strategic Long-Term Resource Plan (SLTRP), which will increase the planning horizon, from 20 years ending in 2037 and extend through 2050. The Power SLTRP lays out alternative strategies for meeting LADWP's regulatory requirements and environmental policy goals for increasing renewable energy and reducing GHG emissions, while maintaining power reliability and minimizing the financial impact on the City's ratepayers (LADWP 2020).

Natural Gas

According to the CEC, approximately one third of energy consumed in California is natural gas (CEC 2021). The Southern California Gas Company (SoCalGas), a publicly regulated utility, is the natural gas service provider to the City of Los Angeles. SoCalGas owns and operates an integrated gas transmission system consisting of miles of pipelines and four storage facilities. SoCalGas provides natural gas for space heating, domestic and commercial hot water, cooking, and air conditioning applications. Together, the California Public Utilities Commission (CPUC) and Federal Energy Regulatory Commission (FERC) regulate SoCalGas' natural gas distribution and conveyance activities. FERC is an independent federal agency that regulates the interstate transmission of electricity, natural gas, and oil. The CPUC regulates natural gas rates and natural gas services, including in-state transportation over the utilities' transmission and distribution pipeline systems, storage, procurement, metering, and billing. The availability of natural gas services is dependent upon current conditions of gas supply and regulatory policies. The City contains existing natural gas infrastructure, including both pipelines and one storage facility (located in Playa del Rey), and in general, the majority of natural gas lines run underground to provide secure transfer and reduce risk of damage.

Telecommunications

Telecommunication services in the City of Los Angeles are provided by various companies, such as but not limited to, AT&T, Verizon, and SBC Telecom. Telecommunication companies are regulated by CPUC. A wide array of products and telecommunication services for residential and commercial uses are offered by various companies, including internet services, wireless services, television technology utilizing digital fiber optic technology, and satellite technology. A variety of telecommunication facilities exist along roadways and other areas around the City. Range and service for an individual tower can vary; therefore, the towers likely serve cities outside of Los Angeles County. All cellular towers and equipment are managed by private telecommunications service providers under the jurisdiction of the Federal Communications Commission (FCC).

Regulatory Framework

Federal

Federal Energy Regulatory Commission

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.

The Federal Communications Commission (FCC) requires all new cellular tower construction to be approved by the state or local authority for the proposed site and comply with FCC rules involving environmental review. Additionally, the Telecommunications Act of 1996 requires construction of new cellular towers to comply with the local zoning authority.

State

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 SoCalGas. Public owned utilities such as the 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 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.[45]

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.

[45] 2018 Integrated Energy Policy Report Updated, Volume II, February 2019.

Local

The City of Los Angeles Information Technology Agency (ITA) is responsible for a broad spectrum of services related to technology services to both internal and external customers. These range from classic IT services, such as computer support, enterprise applications, data networks, and a 24/7 data center to progressive digital services, such as a TV station (LACityview), 3-1-1 Call Center, public safety radio/microwave communications, helicopter avionics, enterprise social media, and more.

ITA's Video Services Regulatory Division advises the Mayor and City Council on certain issues relating to video/cable TV services and private telecommunications franchises. The Division regulates and monitors the compliance of video/cable TV services and franchises issued by the CPUC. More specifically, it ensures that video/cable TV service providers comply with local, state and federal laws and oversees the video/cable TV service interests of City residents.

City of Los Angeles Municipal Code Section 10.5.4

Section 10.5.4 of the LAMC states that telecommunications providers are required to comply with all city, State, and federal regulations during installation and operation of equipment. Additionally, each lease, sublease, or license facilitated by telecommunications providers are required to seek approval from the City.

Environmental Impacts

Thresholds of Significance

The following thresholds of significance were developed in accordance with CEQA Guidelines Appendix G. Impacts would be significant if implementation of the Housing Element Update would:

- **Threshold 4.16-6**: Require or result in the relocation or construction of new or expanded electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects.

Methodology

The analysis of the Housing Element Update's impacts with respect to electricity, natural gas, and telecommunication facilities focuses on whether existing and projected infrastructure capacities or supplies would be sufficient to meet future demands associated with forecast development. Project-generated demands (e.g., electricity, natural gas, telecommunications) are discussed using existing level of development in the City, forecasted level of development in the City, and any applicable utility rates per

development unit. The impact is whether construction of new or relocated facilities would result in environmental impacts.

For purposes of Thresholds 4.16-6, the Housing Element Update would have a significant impact if it resulted in the relocation or construction of electricity, natural gas, or telecommunication facilities and that relocation or construction caused a significant environmental effect, such as the demolition of a historical resource or destruction of a unique archaeological resource. Under this threshold, not having adequate facilities to serve the project is not in and of itself a significant impact. Rather the question is whether construction of needed facilities results in environmental impacts. Therefore, analysis involves a two-part inquiry: first, whether the build out of the RHNA under Housing Element Update can be served by existing facilities or if it is reasonably anticipated to cause the need for new or relocated facilities; and second, if it will need new or relocated facilities, whether it is reasonably anticipated that construction or relocation of such facilities will result in a significant environmental impact.

To determine demand on electricity, natural gas and telecommunication facilities for Threshold 4.16-6, demand from build out of the RHNA is determined based on the need for physical connection of 420,327 housing units to the electrical, natural gas, and/or telecommunication systems. Impacts were evaluated by quantifying Project demands where possible (based on readily available public information, industry standards, and/or modeling results) and comparing Project demands to current system capacity. Specifically, the electrical and natural gas demand associated with development of 420,327 housing units under the Housing Element Update to accommodate existing need and forecasted growth was quantified using SCAQMD's California Emissions Estimator Model (CalEEMod), Version 2020.4.0, as first discussed in Section 4.2, *Air Quality*, of this EIR. Where insufficient data was available to quantify demands (i.e., for telecommunication systems), such demands are discussed qualitatively in order to inform the impact analysis.

Project Impacts and Mitigation Measures

Threshold 4.16-6	Would the Housing Element Update require or result in the relocation or construction of new or expanded electricity, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects?

Impact 4.16-6 Residential development accommodated under the Housing Element Update would increase demand for electric power, natural gas, and telecommunication facilities. However, existing facilities and planned service upgrades in place by providers would ensure that increased demand could be accommodated. Although individual residential developments under the Housing Element Update may require minor construction or relocation of facilities, the environmental impacts of these upgrades would be ***less than significant***.

Electricity

In 2019, California used 277,704 GWh of electricity, down 2.7 percent, or 7,784 GWh, from 2018 (CEC 2021). Electricity would continue to be provided to new housing development in the City by LADWP. The City is urbanized and has a fully functional system of above-ground and underground electrical facilities, primarily found along roadways, to serve the existing and future users. In addition to electrical power conveyance lines, there are numerous electrical substations throughout the City, from which these conveyance lines flow.

As described in Section 3, *Project Description*, project development under the Housing Element Update includes the development of 420,327 units over a period of eight years to accommodate the City's existing need and forecasted growth. Based on CalEEMod results included in Appendix C to this EIR, the electrical demand for the operation of 420,327 units would be approximately 1,978,710 megawatts per hour (MWh) per year, or approximately 1,979 GWh per year. Table 4.16-5 shows the electricity consumption by sector and by total for LADWP in 2019. As shown in Table 4.16-5, residential uses currently consume approximately 7,389 GWh of electricity, which accounts for 34 percent of the total 21,624 GWh of electricity consumed in 2019 (CEC 2019a).

Table 4.16-5 Electricity Consumption (GWh) in the LADWP Service Area in 2019

Agriculture and Water Pump	Commercial Building	Commercial Other	Industry	Mining and Construction	Residential	Streetlight	Total Usage
21.6	11,115.8	937.8	1,780.9	273.3	7,388.6	106.0	21,623.9

Notes: All usage expressed in GWh. Totals may not add up due to rounding.
Source: CEC 2019a

Based on electricity demand calculated by CalEEMod for the Proposed Project (see Appendix C for annual emissions), the demand associated with housing development (i.e.,1,979 GWh) would account for an approximately 26 percent increase above existing residential consumption. However, this is a conservative analysis of electricity demand increase considering that the Housing Element Update would provide housing to meet the existing housing need and forecast population growth, and subsequently a portion of existing electricity use. In addition, new development would be required to comply with energy efficiency standards including in Title 24 of the CCR (California Code of Regulations) as well as with the City's Green Building Code.

Furthermore, numerous plans by LADWP have shifted the generation of electric power to renewable sources of energy. The most recent plan, LADWP's *2016 Final Power Integrated Resource Plan* (IRP), identifies actions that are central to the continued reliability of the LADWP Power System while meeting all regulatory requirements. The 2016 IRP provides detailed analysis and results of several new IRP resource cases, which investigated the economic and environmental impact of an increased RPS of 55 percent by 2030 and 65 percent by 2036, local solar, energy storage, and various levels of transportation electrification within a 20-year horizon. In order to achieve 100 percent renewable energy generation, the LADWP is two years ahead of schedule for early coal replacement by 2025, accelerating its RPS to 50 percent by 2025, 55 percent by 2030, and 65 percent by 2036. In addition, the LADWP is implementing a strategy of 15 percent energy efficiency by 2020, repowering coastal in-basin generating units with new, highly efficient units by 2029 to provide grid reliability and critical ramping capability, accelerating electric transportation to absorb GHG emission from the transportation sector, and investing in a Power System Reliability Program to maintain a robust and reliable Power System. In order to achieve these renewable energy source goals, the LADWP has implemented the following projects and programs that introduce added transmission capacity to meet anticipated future growth, such as housing development accommodated under the Housing Element Update:

- Barren Ridge Renewable Transmission Project; in service as of 2016.
    - 2,000 Megawatts (MW) of added transmission capacity.

- Moapa Southern Paiute Solar, LLC (Moapa) Solar; in service as of 2016.
  - 250 MW of added solar energy supply.
- Heber-1 Geothermal; in service as of 2016.
  - 35 MW of added geothermal energy supply.
- Springbok 1 and 2 Solar; in service as of 2016.
  - 105 MW and 155 MW of added solar energy supply, respectively.
- RE Cinco Solar; in service as of 2016.
  - 60 MW of added solar energy supply.
- Springbok 3 Solar; expected in-service status in 2017.
  - 90 MW of added solar energy supply.
- Solar Incentive Program; 1999 to present.
  - Funding to support installation of 181 MW of operational net-metered solar at over 24,500 customer locations as of November 2016

Although the introduction of new renewable energy sources is expected to meet energy demands associated with future population growth, many renewable energy sources reduce a power grid's baseload reliability due to the fluctuating nature of energy captured (i.e., solar energy is only accumulated during optimum sunlight hours and conditions while energy is consumed 24 hours a day). To meet this challenge, the LADWP's 2018-2019 Power Infrastructure Plan states the following long-term goals to diversify energy generation sources, improve energy storage capabilities, and secure energy reliability in the future (LADWP 2019):

- Replace 4,000 poles, 10,000 crossarms, 850 transformers, 55 miles of lead and synthetic cables annually by 2020.
- Ramp up to resolve an additional 5,000 "fi x-it" tickets annually to reduce backlog to an acceptable level of 2,000 in 10 years.
- Install 1 400 MVA transmission level spare bank by 2022
- Replace 14 transmission level substation circuit breakers by 2022 (RS, SS, CS, SY)
- Replace 2 high side transformers (RS), 1 load side transformer (RS), 18 local substation transformers, 6 substation transmission circuit breakers, 20 circuit breakers (RS), 40 circuit breakers (DS) and automate 12 substations annually by 2020.
- Standardize major assets such as transformers and circuit breakers within each substation to allow for more efficient maintenance, inventory of spare parts, and training of personnel.

- Renovate aging substations and construct new facilities to accommodate load growth and maintain reliability.
- Automate all substations in the next 20 years to improve operational capabilities and communications while reducing operation and maintenance costs.
- Replace Sylmar Converter Station filters by 2020.
- Replace up to 30 circuit-miles of 138 kV LPOF cable annually with goal of replacing all by 2021.
- Replace 15 LPOF cable stop joints annually; continue to identify those needing replacement.
- Ramp up to 24 maintenance-hole cover restraints per year by 2020, with the goal of retrofitting the remaining maintenance hole covers in 4 years. After FY2017-18 goals were met, 180 have been completed, 93 more will be installed, and 241 do not need restraints.
- Administer multi-year painting contract for the 1,400 wholly-owned in-basin galvanized steel transmission towers.
- Install 230 kV Castaic to Haskell Line 3 by 2020.
- Upgrade 115 kV Power Plant 1 & 2 Line to 230 kV by 2023

The California Independent System Operator Corporation's (Cal-ISO) 2019-2020 Transmission Plan also provides a comprehensive evaluation of the ISO transmission grid to identify upgrades needed to successfully meet California's policy goals, in addition to examining conventional grid reliability and requirements. The Cal-ISO 2019-2020 Transmission Plan is a ten-year planning document that assesses California's energy supply capability and reliability and has identified the need for nine supply reliability projects, seven of which are located in the PG&E service territory, one in the GLW/VEA serviced territory, and one in the SCE service territory (Cal ISO 2020).

Based on all of the above, new facilities to provide adequate supply of electricity to development under the Housing Element Update would not be needed. However, similar to other utilities it is anticipated that new housing development would result in the need for the construction or relocation of some power lines or service connections, such as the undergrounding of power lines. Impacts from such construction or relocation work would be anticipated to be less than significant based on their construction and installation in existing right of way and other public easements that have been previously disturbed and based on existing regulatory compliance measures and review and oversight by relevant local and state agencies. Any unusual site-specific conditions that would result in significant impact would be speculative. Additionally, any project to install or relocate facilities would be subject to future environmental review and necessary mitigation to address site specific conditions. Impacts would be ***less than significant***.

Natural Gas

Natural would continue to be provided to new housing development in the City by SoCalGas. Existing natural gas infrastructure (transmission lines and high distribution lines) are provided throughout the City and is typically located underground and along roadways to convey flows to residential and commercial users. Housing development to meet existing need and forecasted growth accommodated by the Housing Element would increase the demand for natural gas and may potentially require new conveyance systems to supply areas with natural gas.

Based on CalEEMod results included in Appendix C to this EIR, the operation of 420,327 units would demand of 6.65 trillion British thermal units (BTU) (i.e., 71,525,372.68 therms), or 71.5 millions of therms (MMThm) of natural gas per year. Table 4.16-6 shows the natural gas consumption by sector and by total for SoCalGas in 2019. As shown in Table 4.16-6, residential uses currently consume approximately 2,419 MMThm of natural gas, which accounts for 45 percent of the total 5,425 MMthm of natural gas consumed in 2019 (CEC 2019b).

Table 4.16-6 Natural Gas Consumption (MMThm) in the SoCalGas Service Area in 2019

Agriculture and Water Pump	Commercial Building	Commercial Other	Industry	Mining and Construction	Residential	Total Usage
72.5	947.8	81.9	1,684.4	219.4	2,418.6	5,424.7

Notes: All usage expressed in MMThm. Totals may not add up due to rounding.
Source: CEC 2019b

Based on natural gas demand calculated by CalEEMod for the Proposed Project (see Appendix C for annual emissions), the demand associated with housing development (i.e., 71.5 MMThm) would account for an approximately 3 percent increase above existing residential consumption. Nonetheless, this is a conservative analysis of natural gas demand increase considering that the Housing Element Update would accommodate housing to meet the existing housing need and forecast population growth, and subsequently a portion of existing natural gas use.

Furthermore, SoCalGas forecasts total gas demand to decline at an annual rate of 1 percent from 2020-2035. The decline in throughput demand is due to modest economic growth, and CPUC-mandated energy efficiency (EE) standards and programs and SB 350 goals. Other factors that contribute to the downward trend are tighter standards created by revised Title 24 Codes and Standards, renewable electricity goals, a decline in core commercial and industrial demand, and conservation savings linked to Advanced Metering Infrastructure (AMI). Per the 2020 California Gas Report, it is anticipated SoCalGas will meet projected demand for natural gas resources through 2026 based on modeled forecasts (SoCalGas 2020). By

comparison, the Housing Element Update accommodates housing development through 2029, which is three years after projected natural gas demand by SoCalGas. However, based on declining natural gas usage and the intent of the Housing Element Update to accommodate existing housing need (i.e., existing natural gas use), the Housing Element Update would not interfere with existing modeled forecasts.

For housing development accommodated under the Housing Element Update, the exact locations of natural gas infrastructure would be confirmed during the design and review process. Any need for infrastructure upgrades would be accomplished through the required design review and approval of natural gas plans. The Housing Element Update would not result in a substantial increase above the existing residential demand. In addition, the current trend of energy efficient practices, increased use of renewable power, and a decreased use of natural gas would further reduce future energy demands. Nevertheless, housing development accommodated by the Housing Element Update may necessitate the construction or relocation new or expanded natural gas distribution facilities, including new service connections or gas lines to serve housing development projects. Impacts from such construction or relocation work would be anticipated to be less than significant based on their construction and installation in existing right of way and other public easements that have been previously disturbed and based on existing regulatory compliance measures and review and oversight by relevant local and state agencies. Any unusual site-specific conditions that would result in significant impact would be speculative. Additionally, any project to install or relocate facilities would be subject to future environmental review and necessary mitigation to address site specific conditions. Impacts would be ***less than significant***.

Telecommunications

The City is urbanized with existing above ground and below ground telecommunications infrastructure. Implementation of the Housing Element Update would increase demand for existing telecommunications in the City through new development projects. Individual telecommunication providers provide planned improvements throughout their service areas, which are generally limited to small scale upgrades and new facilities in existing developed areas. Construction of additional telecommunications facilities or upgrades to existing facilities to meet demands from the Housing Element Update would be undertaken by private telecommunication service providers in accordance with applicable federal, state, and local regulations. However, the Housing Element Update would facilitate housing development to meet the existing housing need and forecast population growth, and subsequently a portion of existing demand on the City's telecommunications infrastructure.

Although no restrictions on the ability to provide adequate telecommunication service are anticipated, new or expanded facilities may still be needed to meet increased demand. Impacts from such construction or relocation work would be anticipated to be less than significant based on their construction and installation

in existing right of way, other public easements, or incorporation into existing buildings or structures that are on previously disturbed land and based on existing regulatory compliance measures and review and oversight by relevant local and state agencies. Any unusual site-specific conditions that would result in significant impact would be speculative. Additionally, any project to install or relocate facilities would be subject to future environmental review and necessary mitigation to address site specific conditions. Impacts would be ***less than significant.***

The types of housing units accommodated under the Housing Element Update would generally fall into five categories of development projects. A review of the housing development in the City in Table 4-2 shows that impacts were less than significant for each of the 54 developments reviewed and that no mitigation was required.

- **Multi-family residential:** Multi-family residential projects may range in size from small apartment buildings with 2-10 units to larger apartment buildings and high-rise structures with hundreds of units. Multi-family developments of any size would require additional electrical and natural gas supply and additional telecommunications infrastructure. Multi-family units could be located in areas throughout the City, including in urbanized areas where multifamily development is allowed today, such as Regional Centers and around transit. For example, the Echo Park SCEA (Sustainable Communities Environmental Assessment), as listed in Table 4-2, analyzed the electrical, natural gas, and telecommunications impacts for 176 multi-family residential units. The SCEA found that the project would not require the acquisition of additional electricity or natural gas supplies beyond what exists currently at the project site for existing uses. The SCEA also determined that the project could be served by existing telecommunications facilities that are available in the project site area (i.e., AT&T). The SCEA concluded that the project would require project- and site-specific infrastructure to connect to existing utilities due to the partially vacant conditions of the site, but the project would not disrupt service to existing customers or require new or expanded facilities.
- **Single-family residential:** Single-family residential projects may range in size and scale from smaller or larger single-family homes to small-lot subdivisions and multi-property single-family subdivisions. Single-family developments of any size would increase the use of existing electrical, natural gas, or telecommunications. Small single-family projects, such as small subdivisions with few net new homes, would be likely to occur in residential areas throughout the City and would not result in a substantial increase in electrical, natural gas, or telecommunications usage. Larger single-family projects, such as small lot subdivisions, could be built throughout the City, but would be more likely to occur as infill development in more urbanized areas of the City, including areas near public transit. The City has electrical service provided by LADWP, natural gas provided by SoCalGas, and telecommunications by multiple providers. It is possible that these types of developments, large single-family projects, could

occur anywhere they are currently allowed. Should these developments occur in areas outside the existing urban development area, new electrical, natural gas, and telecommunications infrastructure could be required which could have environmental impacts. However, these improvements are typically located within roadways so they would be within disturbed areas and would not cause additional impacts.

The Hidden Creek Estates Project involved a project to annex 109 acres of land to the City adjacent to Porter Ranch, for a single-family development with 188 single family housing units. Section IV.O, Energy, of the EIR analyzed impacts related to wasteful and inefficient energy consumption, but also discussed potential impacts related to demand for new facilities:

As described in Section IV.O, Energy, LADWP power service systems are flexible and can be readily altered to meet demand requirements. Electrical service to the project site would be provided in accordance with LADWP Rules and Regulations and project design would be required to comply with sections of the state Building Energy Efficiency. Furthermore, the project would comply with Energy Conservation Standards for New Residential Buildings (Title 24, part 6, Article 2, California Administrative Code), the Los Angeles Building Code, and Title 24, California's Energy Efficiency Standards for Residential and Nonresidential Buildings such that the project would not result in the inefficient, unnecessary, or wasteful consumption energy. With implementation of mitigation measure MM-ENG-1, which requires that the applicant consult with LADWP upon submittal of final plans, and compliance with regulatory requirements, the potentially significant impact to electricity infrastructure and facilities would be mitigated to less than significant.

Due to the project site's location outside SoCalGas's current service area, no natural gas supply facilities have been planned by SoCalGas for the project site. However, in partnership with the project applicant SoCalGas would install natural gas lines beneath the future Mason Avenue extension north of Corbin Avenue and Mason Avenue on the western boundary of Tract 45297 to accommodate the development of Tracts 50505 through 50511 within the Porter Ranch community. Service to the project site would require a connection to this future planned system through the installation of a gas main beneath the proposed extension of Mason Avenue to the project site. SoCalGas anticipates that its existing system has sufficient capacity to provide the flows required by the project with incorporation of additional system improvements finalized through the ongoing engineering process with SoCalGas, as required through mitigation measure MM-ENG-2. Therefore, based on the fact that the project would comply with requirements stipulated by SoCalGas for the provisions of adequate gas infrastructure, that the existing service lines are anticipated to have sufficient capacity for the project gas demand, and that the project applicant would construct any necessary facilities through the proposed Mason Avenue extension alignment during project construction in accordance with MM-ENG-2, the impact to existing gas infrastructure would be less than significant.

- **ADUs:** ADUs include attached ADUs created through a building addition or conversion of existing floor area and detached ADUs of various scales, which are allowed in any zone that allows for residential use as well as on any site that contains an existing residential use. An ADU would result in one or more additional units on a property containing existing or proposed residential units, which would not substantially increase the electrical or natural gas use in an area nor would it require additional telecommunications infrastructure as ADUs provide for modest increases in residential intensity in areas that are already served by these utilities; therefore, impacts would be less than significant.
- **Mixed use development:** Mixed use development could range in size and scale from neighborhood commercial mixed use with smaller nonresidential uses, to high-rise mixed use with larger nonresidential uses. Mixed Use developments are generally located in urbanized areas with existing infrastructure. These areas would include areas zoned for multifamily residential or mixed use development that are located near transit and in Regional Centers. Additional mixed use developments of varying scales could also be located in the High and Highest Resource Tracts shown in Figure 3-5, as a result of the Rezoning Program. As stated above, the city has electrical service provided by LADWP, natural gas provided by SoCalGas, and telecommunications by multiple providers. Due to the density of mixed use development, it can be reasonably assumed that it will serve as infill development and new connections or infrastructure would not be required. For example, the Los Lirios Mixed Used SCEA analyzes a proposed multi-family mixed use development with 65 multifamily housing units for electricity, natural gas, and telecommunications impacts. The SCEA provided the following analysis and impact conclusion for this impact:

  As discussed previously in Section VI.6, electric service is available and will be provided to the Project Site in accordance with LADWP regulations and the Project is part of the total growth load forecast for the City and has been taken into account in the planned growth of the power system. Impacts would be less than significant and no mitigation measures are required.

  As discussed previously in Section VI.6, SoCalGas will provide gas service to the Project in accordance with the rules and regulations in effect at the time service is provided. SoCalGas is satisfactorily meeting its obligations to its current customers and projects to meet obligations of its future customers. As such, SoCalGas's existing infrastructure and storage supplies are well-prepared for the long-term forecasts, including the Project. Impacts would be less than significant and no mitigation measures are required.

  The Project Site is within the Base Rate Area of the AT&T California serving area in the Los Angeles 6 Exchange. AT&T expects to be in a position to provide telephone service to the Project upon request in accordance with requirements of, and at the rates and charges specified in, its Tariffs that are on file with the California Public Utilities Commission. The Project Site is also within the service area of Charter Communications which may serve the Project Site after conducting a survey of the property. There are no

existing cellular towers located adjacent to the Project Site and no cellular towers are proposed by the Project. The Project would not result in the relocation of expansion of telecommunication facilities. Impacts would be less than significant and no mitigation measures are required.

- **Conversion and/or rehabilitation:** Existing nonresidential, residential, and mixed use structures could be converted or rehabilitated for new residential uses in areas throughout the City. The conversion or rehabilitation of existing properties would not involve new construction but may result in full-time residents in structures that were previously not occupied by residents in the building. An increase in residents in the building would be minimal under small conversion projects (approximately 2-10 units), but could involve large buildings with hundreds of units. Whether a small or larger conversion/rehabilitation project, such a project would be limited by site specifics (e.g., area of the site, existing building configuration) and City development standards. Therefore, a conversion/rehabilitation project is not anticipated to result in a substantial increase in demand upon existing electricity, natural gas, and telecommunications systems and infrastructure. Even larger projects involving hundreds of new units would not foreseeably result in impacts as none of the case studies in Table 4-2 have significant impacts related to electricity, natural gas, or telecommunication facilities. to the extent that a conversion of rehabilitation project does involve new construction, the impacts from that construction would be similar to those explained above for mixed-use and/or multi-family residential development.

None of the environmental assessments for housing reviewed for this EIR identified significant unavoidable impacts to electricity, natural gas, or telecommunications or the need for mitigation. (See Table 4-2).

Mitigation Measures

No significant impact would occur; therefore, mitigation is not required for housing development accommodated under the Housing Element Update.

4.16.4. CUMULATIVE IMPACTS

The geographic extent of cumulative analysis for the Housing Element Update is the entire City of Los Angeles, consistent with the impact analysis provided above. Cumulative impacts may occur if impacts of the Proposed Project combine with similar impacts of other projects in the cumulative scenario. In this case, the Proposed Project is the Housing Element Update, inclusive of all future development projects that may occur under the Housing Element Update. Therefore, the cumulative scenario is not comprised of other Housing Element Update projects (which collectively constitute the Proposed Project), but rather of projects unrelated to the Housing Element Update that could result in similar impacts to utilities and service

systems during the plan horizon of the Housing Element Update, such as nonresidential development and housing projects that were approved but had not received certificate of occupancy at the time this EIR was commenced. As such, cumulative impacts to utilities and service systems could occur if such impacts to utilities and service systems from development projects under the Housing Element Update combine with similar impacts to utilities and service systems of other development projects throughout the geographic extent of analysis, which is defined as the City of Los Angeles.

Wastewater

Housing development accommodated by the Housing Element Update would increase wastewater generation by approximately 66 mgd which is within available capacity of the existing wastewater treatment plants. Nonetheless, this is a conservative estimate as it assumes that every new housing unit would be occupied by a new resident when instead it is likely that many would be occupied by existing residents who currently live in existing units in the city and are experiencing cost-burden or overcrowded conditions that would be alleviated by the construction of new housing units. As discussed under Impact 4.16-1 and Impact 4.16-3, the HWRP (which treats the majority of wastewater in the City) has approximately 250 mgd of available daily capacity. Assuming that the Proposed Project would constitute approximately 26 percent of the available daily capacity, a remining 74 percent would be available to serve nonresidential cumulative development.

Therefore, Citywide growth would increase wastewater generation, but given the remaining capacity even after development of the anticipated units, such increases would not approach overall treatment capacity. Therefore, the cumulative increase in wastewater generation would not exceed the capacity of the City's wastewater treatment plants. Additionally, the City's 2006 Integrated Resources Plan incorporates a Wastewater Facilities Plan to meet future wastewater needs through the expansion of overall treatment capacity, maximizing the potential to reuse recycled water and implementation of new water conservation and technology programs (LADPW 2006).

Citywide cumulative growth would contribute to an anticipated citywide increase in wastewater flow and place added demands on the wastewater conveyance system as future development takes place. Cumulative development, including housing development accommodated under the Housing Element Update, could require the construction of new or upgraded wastewater facilities. Such upgrades would likely occur within existing utility easements and would not result in new areas of disturbance. Construction of new or expanded conveyance facilities may be needed as a result of housing development accommodated under the Proposed Project and, as discussed above, the City's WCIP identifies a number of sewer line projects to accommodate future capacity. The City would require that localized system deficiencies are adequately addressed by the responsible project. Any future upgrades would be designed

in accordance with applicable provisions of the LAMC and to the satisfaction of the City Engineer. Routine infrastructure projects involving replacement or upgrade of sewer lines generally result in the preparation of an environmental document under CEQA. Regardless, impacts associated with construction of new facilities would be limited to the area in which the specific construction activity is occurring and would not contribute to any cumulative or citywide environmental impacts.

Stormwater

Continued compliance with the City's LID Ordinance for all cumulative development would ensure that any future development in Los Angeles would not increase demands on stormwater drainage facilities and or expansion of existing facilities beyond specific improvements needed for individual development projects. As with the Housing Element Update, long-term cumulative development throughout the City would generally improve surface water quality by replacing older development with new development that incorporates LID methods. Housing development accommodated under the Housing Element Update does not include any provisions that would substantially increase stormwater runoff or otherwise adversely affect stormwater drainage facilities. Therefore, cumulative impacts related to stormwater drainage facilities would not be cumulatively considerable and cumulative impacts would be less than significant.

Water Supply

Total water demand projected by the LADWP 2020 UWMP accounts for growth within its jurisdictional boundaries, which is based on SCAG's demographic data and the 2020-2045 RTP/SCS, which would include the cumulative projects as well as the growth being accommodated by the Housing Element Update. The LADWP is projected to supply 693,200 afy, which would accommodate the citywide estimated water demand of 597,000 afy with implementation of the Housing Element Update. Per the 2020 UWMP, based on current water supplies, planned future water conservation and planned future water supplies, LADWP will be able to reliably provide water to meet the demands of the City for the 25-year planning horizon identified in the 2020 UWMP, including the planning period of the Housing Element Update through the year 2029. Therefore, cumulative development would not result in a cumulatively significant impact with respect to water supply.

Water Facilities

The cumulative increase in water demand could potentially increase pressure on the City's water infrastructure, including water mainline and trunk lines. In 2019, LADWP prepared a Water Infrastructure Plan, which addresses the City's long-term goals for replacing the City's water infrastructure. The report states that LADWP plans to replace approximately 500 miles of leak-prone and high-risk water mainlines

in the next 10 years, and LADWP is increasing the rate at which they replace water distribution mainline to bring the pipe replacement cycle closer to the expected pipe life cycle. The upgrading and replacement of the City's water infrastructure would generally require an environmental analysis under CEQA. To the extent that any significant impacts could result from the unique characteristics of a specific project site, those impacts are too speculative to analyze at this time. Nonetheless, the environmental impacts of the construction and operation of water lines are localized in nature. Therefore, the Housing Element Update would not make a cumulatively considerable contribution to impacts related to water conveyance. Based on the above information, the incremental effect of the Housing Element Update related to water conveyance would not be cumulatively considerable and cumulative impacts would be less than significant.

Electrical Power

Citywide development through 2029 would cumulatively increase demand for electrical power. However, as discussed above, LADWP's 2016 Final Power IRP and 2019-2020 Power Infrastructure Plan identify actions that would achieve the continued reliability of the LADWP Power System throughout the LADWP service area while meeting all regulatory requirements. The Housing Element Update would contribute to the overall citywide demand for electrical power, but would not result in a substantial exceedance of existing or planned system capacity. Future development projects would be required to adhere to existing State and local requirements related to electrical power. New or expanded facilities for the generation, transmission, storage, and distribution of electricity may be needed to meet increased citywide demand. Impacts associated with the construction of new facilities would generally be localized and involve temporary construction impacts. Based on the above, the incremental effect of the Housing Element Update related to the provision of electrical power infrastructure would not be cumulatively considerable and cumulative impacts would be less than significant.

Natural Gas

Citywide development through 2029 would cumulatively increase demand for natural gas. However, as discussed above, the current trend of energy efficient practices, increased use of renewable power, and a decreased use of natural gas would further reduce future energy demands. Natural gas use by development facilitated by the Housing Element Update would not exceed the projected available supply for natural gas or require the construction of new or expanded natural gas facilities. Future development projects would be required to adhere to existing state and local requirements related to natural gas. New or expanded facilities for the transmission and distribution of natural gas may be needed to meet increased citywide demand. Impacts associated with the construction of new facilities would generally be localized and involve temporary construction impacts. Based on the above, the incremental effect of the Housing

Element Update related to the provision of natural gas infrastructure would not be cumulatively considerable and cumulative impacts would be less than significant.

Telecommunications

Citywide development through 2029 would cumulatively increase demand for telecommunication service. However, as discussed above, the City is well served by telecommunications facilities and no restrictions on the expansion of service as necessary to meet future demands is anticipated anywhere in the City. Future development projects would be required to adhere to existing state and local requirements related to telecommunication service. New or expanded telecommunication facilities may be needed to meet increased citywide demand. Impacts associated with the construction of new facilities would generally be localized and involve temporary construction impacts. A. The incremental effect of the Housing Element Update related to the provision of telecommunication infrastructure would not be cumulatively considerable and cumulative impacts would be less than significant.

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4.17 WILDFIRE

This section of the Draft EIR analyzes potential wildfire impacts of the Housing Element Update. A wildfire, sometimes referred to as a wildland fire, is an uncontrolled fire typically originating in a rural area and rapidly spreading over expanses of brush, woodland, or other wilderness area. Wildfires can be ignited by natural events, such as lightning, or human activity, including but not limited to the operation of vehicles and equipment or the sparking of utility lines. Included in this section are a description of the existing wildfire environment in the City, State and local regulations concerning wildfire management, and a description of potential impacts generated by wildfires. Impacts from the Safety Element Update related to Wildfire were found to be less than significant in the Initial Study and will not be discussed further in this section (see Appendix A.)

4.17.1 ENVIRONMENTAL SETTING

Existing Conditions

Local Setting

Brush fires pose a threat to life and property in areas of the City and the Southern California region abutting undeveloped hillsides due to conditions related to fuel, topography, and climate. Conditions in the City make it susceptible to potentially devastating wildfires. The City consists of a coastal plain and inland valley separated by mountains. The mountains and canyons in the City are particularly subject to wildfire risks. Climactic conditions including persistent droughts, low humidity, and strong wind patterns have contributed to the ignition and rapid spread of wildfires in the City. According to University of Southern California campus meteorological station data, total precipitation in the Los Angeles area between 2010 and 2020 ranged from 16.36 inches to 14.86 inches and had an average annual rainfall for those ten years of 13.28 inches , providing conditions for the drying of brush and other forms of easily ignitable vegetative fuel throughout the remainder of the year (Los Angeles Almanac 2021). Drought is a recurring feature of California's climate. Notable historical droughts within the state include off- and on- dry conditions spanning more than a decade in the 1920s and 1930s, 1976-1977, 1987-1992, 2007-2009, 2012-2016, and on April 21, 2021 the governor announced several actions related to drought preparedness as California is experiencing a second consecutive dry winter (California Department of Water Resources 2021). Fire season in California historically spans late summer and early autumn. However, between October and March, the risk of wildfire is exacerbated by the onset of Santa Ana Winds, which are characterized by strong, dry downslope winds that originate in the inland desert regions and blow to the Pacific Coast.

Historic Wildland Fires in Southern California

From 2017 to 2020, nine major wildland fires have occurred in Los Angeles County wildlands, which the Los Angeles County Fire Department defines as large and extended-day fires (County of Los Angeles Fire Department 2021). Wildfire impacts have grown more severe in recent decades and this trend is expected accelerate in the coming years due to the effects of climate change, a growing population, and expanding urban development (Safford & Van de Water 2014; Yufang 2015). Southern California experienced four large wildfires during the 2017-2018 fire season and five large wildfires during the 2019-2020 fire season, which were exacerbated by the Santa Ana Winds (County of Los Angeles Fire Department 2021). The hazard from wildfire is especially great when dry Santa Ana Winds arrive, usually in the fall and winter seasons, as evidenced by the recent 2017 wildfires referred to as the Skirball Fire in the Bel Air neighborhood of the City of Los Angeles, Creek Fire in the Sylmar neighborhood of the City of Los Angeles, and the Thomas Fire in Ventura and Santa Barbara Counties. The Skirball Fire affected approximately 422 acres in the Bel Air neighborhood, destroying six structures and damaging 12 structures. The Creek Fire affected the area four miles east of Sylmar in the San Gabriel Mountains, burning 15,619 acres, destroying 123 structures, and damaging 81 structures (City of Los Angeles 2018). The Thomas Fire affected the areas of Ojai, Santa Paula, Ventura, Montecito, Carpinteria, Santa Barbara, and Fillmore in the Ventura and Santa Barbara Counties. The Thomas Fire affected an estimated 282,000 acres, destroyed 1,063 structures, and damaged 280 structures. (California Department of Forestry and Fire Protection [CAL FIRE] 2021a). The Woolsey Fire in November 2018, affected areas in Ventura and Los Angeles Counties, burned 96,949 acres, destroyed 1,643 structures, damaged 341 structures, and resulted in three fatalities. (CAL FIRE 2021b). The Getty Fire in October 2019, located on East Sepulveda Boulevard near the I-405 burned 745 acres, destroyed approximately 10 residences and damaged another 15. (Los Angeles Fire Department [LAFD] 2019). Refer **to** Figure 4.17-1**a,** Figure 4.17-1**b, and** Figure 4.17-1**c** for the Very High Fire Hazard Severity Zones (VHFHSZ) located within the boundaries of the City.

Fire Protection Services

The LAFD is the primary provider of fire protection services in the City. The LAFD has several fire rescue resources including triple combination and aerial fire engines, a specialized "Heavy Rescue" tow-truck, a fire boat, a helicopter fleet ranging from light- to medium-duty, and a foam apparatus that is useful when suppressing fires that are resistant to traditional water-based operations (LAFD 2021a). The LAFD has also implemented various programs, such as the Ready, Set, Go program, which educates residents on wildfire evacuation procedures, brush clearance program; and the Red Flag Restricted Parking program which removes illegally parked cars in VHFHSZ (LAFD 2021b). In addition to protection and response services, LAFD operates preventative and hazard reduction programs, land use and development review, building inspection, and public awareness campaigns. CAL FIRE, which is discussed in more detail below in

Regulatory Setting, provides supplementary fire protection services in privately owned wildlands throughout much of the state, including Los Angeles County.

4.17.2 REGULATORY SETTING

Federal

National Cohesive Wildland Fire Management Strategy

The U.S. Forest Service (USFS), in coordination with other federal, tribal, state, and local partners/agencies developed the National Cohesive Wildland Fire Management Strategy (The National Strategy), which has three key components: Resilient Landscapes, Fire Adapted Communities, and Safe and Effective Wildfire Response.[1]

Resilient Landscapes addresses the need for sustainable and resistant landscapes, specific to a local region's environment, to aid in recovery from wildfires. In the National Cohesive Wildland Fire Management Strategy (April 2014), Landscape Classes are identified to help inform potential management options and/or policies to maintain fire prone landscaped areas that are specific to a particular region. Fire Adapted Communities would account for a community's ability to prepare for, respond to, and recover from a wildfire. Safe and Effective Wildfire Response addresses enhancing wildfire response preparedness, while emphasizing structural protection and wildfire prevention. The National Strategy provides various actions and activities that can be implemented at the national, regional, and local levels to achieve reduced wildfire threats to landscapes, communities, the public, and emergency responders.

All of Los Angeles County is within Landscape Class A, Urban Developed Built, which is identified to have a high percent of forested area, a moderate area burned (2002-2011), a moderate historical fire frequency, a moderate index of prescribed fire activity, a moderate federal ownership, a very high average of urban value, a low natural landscape percentage, and a moderate natural-mixed landscape percentage.[2]

Federal Wildland Fire Management Policy

The Federal Wildland Fire Management Policy was developed in 1995 and updated in 2009[3] by the National Wildfire Coordinating Group, a federal multi-agency group that establishes consistent and coordinated fire management policy across multiple federal jurisdictions. The Federal Wildland Fire Management Policy

1 United States Forest Service National Cohesive Wildland Fire Management Strategy, The National Strategy, April 2014, https://www.forestsandrangelands.gov/documents/strategy/strategy/CSPhaseIIINationalStrategyApr2014.pdf. Accessed May 2021.
2 United States Forest Service National Cohesive Wildland Fire Management Strategy, The National Strategy, April 2014, Page 17, https://www.forestsandrangelands.gov/documents/strategy/strategy/CSPhaseIIINationalStrategyApr2014.pdf. Accessed May 2021.
3 Federal Wildland Fire Management Policy, Guidance for Implementation of Federal Wildland Fire Management Policy, February 2009, https://www.nifc.gov/policies/policies_documents/GIFWFMP.pdf. Accessed May 2021.

provides policy direction to state and local agencies for the safety of emergency responders and the public during wildfire events, activities for the purposes of fire management (i.e. vegetation maintenance) and ecosystem sustainability, responding to wildfires, protection of life and community infrastructure, and measures to prevent wildfire events.

National Fire Plan

The National Fire Plan was a Presidential directive in 2000 as a response to severe wildland fires throughout the United States. The National Fire Plan focuses on reducing fire impacts on rural communities and ensuring sufficient fire-fighting capacity in the future. The plan addresses five key points: Firefighting, Rehabilitation, Hazardous Fuels Reduction, Community Assistance, and Accountability. The plan provides technical, financial, and resource guidance and support for wildland fire management across the United States. The U.S. Forest Service and the Department of the Interior work to implement the key points outlined in the plan.

These five key points would address and focus on needs such as preparing for wildfires, the capacity to take prompt action when responding to wildfires; restoration, rehabilitation, and protection of communities after a wildfire occurs; potential programs that would help with reducing the risk of wildfires, including continued management from of wildfire fuel sources, potential hazard mitigation, and restoration of ecosystems; working directly with communities for adequate planning and action to increase protections for people and property; and providing for continued accessible information regarding the goals of the National Fire Plan.[4]

National Fire Protection Association Codes, Standards, Practices, and Guides

The National Fire Protection Association (NFPA) develops codes, standards, recommended practices, and guides through a consensus standards development process approved by the American National Standards Institute (ANSI). The consensus standards development process brings together various professionals to achieve consensus on fire and other safety issues. NFPA standards are recommended guidelines and nationally accepted good practices in fire protection but are not law or codes, unless adopted or referenced as such by the California Fire Code or Local Fire Agency. Typical standards would include: Standard for Portable Fire Extinguishers, Standards for Installation of Sprinkler Systems, National Electrical Code, National Fire Alarm and Signaling Code, Standards for Fire Doors and Other Opening Protectives, Life Safety Code, as well as a number of other standards and codes specific to a building's use and/or occupancy.

[4] U.S. Department of the Interior and USDA Forest Service, Managing the Impact of Wildfires on Communities and the Environment, September 2000, https://www.forestsandrangelands.gov/documents/resources/reports/2001/8-20-en.pdf. Accessed May 2021.

Federal Energy Regulatory Commission

The Federal Energy Regulatory Commission (FERC) requires that sufficient brush clearance be maintained between trees/vegetation and electric transmission lines. FERC does not have a direct role in electric utility plans for tree trimming and vegetation clearance but does approve reliability standards that apply to electric transmission facilities to ensure service reliability and safety. Lower voltage distribution facilities, generally lines below 200 kilovolts, are regulated by the utility regulatory commissions in each state, which set vegetation management standards for distribution lines.[5] California requirements are described below, under the subheading for state regulations.

North American Electric Reliability Corporation Standards

The North American Electric Reliability Corporation (NERC) is a nonprofit corporation with the overarching goal of ensuring the reliability of the bulk power system in North America. The NERC develops and enforces reliability standards, monitors the bulk power systems, and educates, trains, and certifies industry personnel. To improve reliability of regional electric transmission systems, NERC developed a transmission vegetation management program that is applicable to all transmission lines operated at 200 kilovolts and above to lower-voltage lines designated by the Regional Reliability Organization as critical to the reliability of the electric system in the region. This plan establishes requirements of the formal transmission vegetation management program, which includes identifying and documenting clearances between vegetation and any overhead, underground supply conductors while taking into consideration transmission line voltage, the effects of ambient temperature on conductor sag under maximum design loading, fire risk, line terrain and elevation, and the effects of wind velocities on conductor sway. The clearances identified must be no less than those set forth in the Institute of Electrical and Electronics Engineers Standards 516-2009, Guide for Maintenance Methods and Energized Power Lines.

State

California Fire Code & California Building Code

The California Fire Code (CFC), Chapter 9 of Title 24 of the California Code of Regulations (CCR), was created by the California Building Standards Commission based on the International Fire code and is updated every three years. The overall purpose of the CFC is to establish the minimum requirements to safeguard the public health, safety, and general welfare from the hazards of fire, explosion, or dangerous conditions in new and existing buildings, structures, and premises, and to provide safety and assistance to

[5] Federal Energy Regulatory Commission, Transmission Vegetation Management FAC-003-4, https://www.nerc.com/pa/Stand/Reliability%20Standards/FAC-003-4.pdf. Accessed May 2021.

firefighters and emergency responders during emergency operations. Chapter 49 of the CFC contains minimum standards for development in the wildland–urban interface and fire hazard areas. The CFC also provides regulations and guidance for local agencies in the development and enforcement of fire safety standards.

Chapter 7A of the California Building Code (CBC) regulates building materials, systems, and/or assemblies used in the exterior design and construction of new buildings located within a wildland-urban interface fire area. This chapter establishes minimum standards for the protection of life and property by increasing the ability of a building located in any Fire Hazard Severity Zone within State Responsibility Areas or a wildland-urban interface fire area to resist the intrusion of flames or burning embers projected by a vegetation fire and contributes to a systematic reduction in conflagration losses. New buildings located in such areas are required to comply with the ignition resistant construction standards outlined in Chapter 7A. The CBC also includes minimum requirements for driveway widths, the creation and maintenance of wildfire buffers, sprinklers, and alarms.

Part 9 of the CFC mandates minimum building requirements designed to "safeguards the public health, safety and general welfare from the hazards of fire, explosion or dangerous conditions, …and provides safety and assistance to fire fighters and emergency responders." The requirements apply to the construction, alteration, movement, or movement of buildings, in addition to repairs, operation of equipment, use and occupancy of buildings, means of egress, evacuation plans, location, maintenance, removal, and demolition of every building or structure or any appurtenances.

The CFC also regulates the use, handling, and storage of hazardous materials at fixed facilities. The CFC and the California Building Code use a hazards classification system to determine what protective measures are required to protect life and property. The CFC uses a permit system based on hazard classification to ensure that these safety measures are met.

California Department of Forestry and Fire Protection

The California Department of Forestry and Fire Protection (CAL FIRE) is tasked with reducing wildfire-related impacts, enhancing California's resources, and conducting emergency response. CAL FIRE is also responsible for the protection of approximately 31 million acres of state responsibility area (SRA) consisting of privately-owned wildlands along with administration of private and public forests within the state. At the local level, CAL FIRE provides a variety of services including serving via contract as fire department staff for jurisdictions throughout California. CAL FIRE is responsible for enforcing State of California fire safety codes included in the CCR and California Public Resources Code throughout the SRA. Public Resources Code 4291 generally states that any person operating any structure located on brush-covered

lands or land covered with flammable materials is required to maintain defensible space around the structure, regardless of whether it is in or adjacent to SRA. CCR Title 14 Section 1254 identifies minimum clearance requirements around utility poles.

CAL FIRE also inspects utility facilities and makes recommendations regarding improvements in facility design and infrastructure. CAL FIRE recommends a joint inspection between the utility owner and CAL FIRE so that each entity may assess the current state of the facility, to successfully implement fire prevention techniques and policies. Violations of state fire codes discovered during the inspections are required to be brought into compliance with the established codes. If a CAL FIRE investigation reveals that a wildfire occurred as a result of a violation of a law or negligence, the responsible party could face criminal and/or misdemeanor charges. In cases where a violation of a law or negligence has occurred, CAL FIRE has established the Civil Cost Recovery program, which requires parties liable for wildfires to pay for wildfire-related damages.

California Code of Regulations: Title 24 Division 1.5

Title 14 of the CCR, Division 1.5, establishes the regulations for CAL FIRE and is applicable in all SRAs where CAL FIRE is responsible for wildfire protection. SRAs within the City of Los Angeles may include small portions along the eastern edge of Simi Hills, the south eastern edge of the Santa Susana Mountains, and the south western edge of the San Gabriel Mountains, where these mountain ranges meet the City of Los Angeles boundaries. Title 14 of the CCR, Section 1270, et seq., establishes minimum standards for emergency access, fuel modification, setback to property lines, signage, and water supply.

Fire Hazard Severity Zones

CAL FIRE uses Fire Hazard Severity Zones[6] (FHSZs) to classify the anticipated fire-related hazard for SRAs. The classifications include Non-Wildland Non-Urban, Moderate, High, and Very High. These fire hazard measurements take into account vegetation, topography, weather, crown fire production, and ember production and movement.[7]

[6] CAL FIRE, Office of the State Fire Marshal, Fire Severity Zone Maps, https://osfm.fire.ca.gov/divisions/wildfire-planning-engineering/wildland-hazards-building-codes/fire-hazard-severity-zones-maps/

[7] CAL FIRE, Office of the State Fire Marshal, State of California Fire Hazard Severity Zones In State Responsibility Areas, November 7, 2007, https://osfm.fire.ca.gov/media/6636/fhszs_map.pdf, Accessed May 2021. ArcGIS, California Fire Hazard Severity Zones, https://www.arcgis.com/home/webmap/viewer.html?webmap=ab80ffe0a139445d8f16a06178720b2b, Accessed May 2021.

State Responsibility Area Maps

CAL FIRE adopted Fire Hazard Severity Zone maps for State Responsibility Areas (SRA) in November 2007. The maps and related regulations were approved by the Office of Administrative Law. Government Code Section 51179 states the following:

> A local agency shall designate, by ordinance, very high fire hazard severity zones in its jurisdiction within 120 days of receiving recommendations from the director pursuant to subdivisions (b) and (c) of Section 51178. A local agency shall be exempt from this requirement if ordinances of the local agency, adopted on or before December 31, 1992, impose standards that are equivalent to, or more restrictive than, the standards imposed by this chapter.

California Public Resources Code

California Public Resources Code (PRC) Section 4290 establishes minimum standards related to defensible space for residential, as well as commercial and industrial, properties in the SRA or, after July 1, 2021, a VHFHSZ, including provisions for pertaining to road standards for fire equipment access; standards for signs identifying streets, roads, and buildings; minimum private water supply reserves for emergency fire use; and fuel breaks and greenbelts. Applicable sections of the PRC mandate standards for firebreaks and the maintenance of a specific circumference around poles and towers that support certain types of electrical utility apparatuses (Section 4292) and operation of power equipment (Sections 4427- 4428), including a clearance zone of at least 25 feet when operating certain types of power tools in an area covered by forest, brush, or grass (Section 4431), intended to minimize risks in areas subject to wildfire. In addition, Government Code Section 66474.02, also known as the Subdivision Map Act, prohibits the subdivision of parcels in a VHFHSZ, unless a city or county planning commission finds that the subdivision design and location are consistent with defensible space regulations in PRC Sections 4290 and 4291, public fire protection services would be available for structures located throughout the subdivision, and road designs meet standards for fire equipment ingress and egress per PCR Section 4290 and any local ordinance. Provisions in the Los Angeles Fire Code reinforce State safety regulation by defining standards for the design of fire access roads (Section 503), mandating fire safety procedures for the construction and demolition of structures (Section 3301-3317), regulating the types of activities permitted within a VHFHSZ (Section 4908), and requiring that property owners in a VHFHSZ clear brush and other native vegetation within a 200-foot radius of a building (Section 57.322).

California Government Code Section 66474.02

California Government Code Section 66474.02, also known as the Subdivision Map Act, prohibits the subdivision of parcels in a VHFHSZ, unless a city or county planning commission finds that the subdivision

design and location are consistent with defensible space regulations in PRC Sections 4290 and 4291, public fire protection services would be available for structures located throughout the subdivision, and road designs meet standards for fire equipment ingress and egress per PCR Section 4290 and any local ordinance. Section 66474.02 also mandates that the design of new subdivisions adhere to defensible space regulations and ingress and egress road standards for fire equipment.

California Public Utilities Commission General Order 95 - Rules for Overhead Electric Line Construction

General Order 95[8] was initially adopted in 1941 and was most recently updated in 2009 for Southern California. General Order 95 governs the design, construction, and maintenance of overhead electrical lines. Rule 31.1 generally states that design, construction, and maintenance of overhead electrical lines should be done in accordance with accepted good practices for the given location conditions known at the time by the persons responsible for the design, construction, and maintenance of the overhead electrical lines and equipment. Rule 35 of General Order 95 requires the following:

- 4 feet radial clearances for any conductor of a line operating at 2,400 volts or more, but less than 72,000 volts
- 6 feet radial clearances for any conductor of a line operating at 72,000 volts or more, but less than 110,000 volts
- 10 feet radial clearances for any conductor of a line operating at 110,000 volts or more, but less than 300,000 volts
- 15 feet radial clearances for any conductor of a line operating at 300,000 volts or more

Executive Order N-05-19 [9]

Due to the severe wildfires that California experienced in 2018, the Governor signed Executive Order N-05-19, directing CAL FIRE, in consultation with other State agencies and departments, to provide a written report with recommendations necessary to mitigate and prevent wildfires. The report includes recommendations for immediate, medium-term, and long-term actions to prevent the impacts of destructive and deadly wildfires. CAL FIRE completed this report on February 22, 2019. [10]

The Community Wildfire Prevention & Mitigation Report identifies priority projects that can be immediately implemented to help protect the most vulnerable communities, as well as broader solutions

[8] State of California, Rules for Overhead Electric Line Construction, General Order No. 95, May 2018, http://docs.cpuc.ca.gov/PublishedDocs/Published/G000/M217/K418/217418779.pdf. Accessed May 2021.
[9] State of California, Executive Department, Executive Order N-05-19, https://www.gov.ca.gov/wp-content/uploads/2019/03/3.22.19-Wildfire-State-of-Emergency.pdf. Accessed May 2021.
[10] State of California, California Department of Forestry and Fire Protection, Community Wildfire Prevention & Mitigation Report, https://www.fire.ca.gov/media/5584/45-day-report-final.pdf. Accessed May 2021.

for state government to consider in the immediate, near, and longer terms. Immediate actions that would be taken include addressing priority fuel reduction and treatment projects throughout the state, addressing the housing needs of staff needed for completing this work, and assessing funding, personnel, and administrative needs to maximize the workforce effectiveness, as well as aligning community education campaigns across state and local entities. Medium-term actions would include: execute State Agency MOU for fuels reduction, identify options for retrofitting homes to new wildland urban interface standards, create incentives for fuels reduction on private lands, continue to develop the methodology to assess communities at risk, jumpstart the workforce development for forestry and fuels work, develop mobile data collection tool(s) for project reporting, coordinate with air quality regulators to enable increased use of prescribed fire, and develop technology tools to enable real time prescribed fire information sharing. Long-term actions include certifying the California Vegetation Treatment Program Environmental Impact Report, developing a scientific research plan regarding management and mitigation with funding recommendations, providing technical assistance to local governments to enhance or enable fire hazard planning, updating codes governing defensible space and forest and rangeland protections, and requesting the Board of Forestry and Fire Protection review the Forest Practice Act and Rules and make recommendations on changes needed to restore forest health.[11]

Senate and Assembly Bills

Senate Bill 209: Wildfire Forecast and Threat Intelligence Integration Center

Senate Bill 209 was approved by the Governor on October 2, 2019, establishing the Wildfire Forecast and Threat Intelligence Integration Center which is composed of representatives from specified state and other entities. This bill requires the center to serve as the state's integrated central organizing hub for wildfire forecasting, weather information, and threat intelligence gathering, analysis, and dissemination and to coordinate wildfire threat intelligence and data sharing, as provided. The bill also requires the center to, among other things, develop a statewide wildfire forecast and threat intelligence strategy, as provided, and protect and safeguard sensitive information.[12]

Senate Bill 901

The Budget Act of 2018 appropriated $99,376,000 to the Office of Emergency Services for the purposes of local assistance. Senate Bill (SB) 901, approved by the Governor on September 21, 2018, revises the Budget Act of 2018, allowing for $25,000,000 of those appropriated funds to be applied to support activities directly related to regional response and readiness. Such activities related to regional response and readiness would

[11] State of California, California Department of Forestry and Fire Protection, Community Wildfire Prevention & Mitigation Report, page 8, https://www.fire.ca.gov/media/5584/45-day-report-final.pdf. Accessed May 2021.
[12] California Senate Bill 209, 2019, https://leginfo.legislature.ca.gov/faces/billNavClient.xhtml?bill_id=201920200SB209. Accessed May 2021.

include pre-deployment of Office of Emergency Services fire and rescue, and local government resources that are part of the California Fire and Rescue Mutual Aid System or additional resources upon the authority and approval of the Office of Emergency Services to meet the requirements for state resources called up for pre-disaster and disaster response. [13]

Assembly Bill 1054

Assembly Bill (AB) 1054, approved by the Governor on July 12, 2019, establishes the California Wildfire Safety Advisory Board, which consists of seven members appointed by the Governor, Speaker of the Assembly, and Senate Committee on Rules. The Board is required to advise and make recommendations related to wildfire safety to the Wildfire Safety Division, or on and after July 1, 2021, to the Office of Energy and Infrastructure Safety, which was established by AB 111 or SB 111 of the 2019-20 Regular Session. [14]

California Strategic Fire Plan

In January 2019, CAL FIRE released the 2019 California Strategic Fire Plan (Strategic Plan)[15]. This plan outlines CAL FIRE's Mission, Vision, Values, and Goals. Under these three elements The Strategic Plan focuses on four primary goals: 1) Improve our core capabilities, 2) Enhance internal operations, 3) Ensure health and safety, and 4) Build an engaged, motivated and innovative workforce. Goal 1 includes emergency response, natural resources protection, prevention and regulatory oversight. Goal 2 includes continuous review and evaluation of internal core operations to find ways to streamline and maximize CAL FIRE's effectiveness. Goal 3 addresses the continued health and safety of CAL FIRE's workforce. Goal 4 addresses continued recruitment, training, and retention of the CAL FIRE workforce. Also included in the Strategic Plan are objectives to meet each of the four goals, as well as how successful implementation of the Strategic Plan is measured.

Local

Local Responsibility Area Maps

Government Code 51175-51189 directs CAL FIRE to identify areas of very high fire hazard severity zones within Local Responsibility Areas[16] (LRA). These areas are referred to as VHFHSZ. VHFHSZs are based on data and models of potential fuels over a 30-50 year time horizon, their associated expected fire behavior,

[13] California Senate Bill 901, 2018, https://leginfo.legislature.ca.gov/faces/billTextClient.xhtml?bill_id=201720180SB901. Accessed May 2021.
[14] California Assembly Bill 1054, https://leginfo.legislature.ca.gov/faces/billTextClient.xhtml?bill_id=201920200AB1054. Accessed May 2021.
[15] CAL FIRE, California Strategic Fire Plan, January 2019, https://www.fire.ca.gov/media/5504/strategicplan2019-final.pdf. Accessed May 2021.
[16] CAL FIRE, Office of the State Fire Marshal, Los Angeles Very High Fire Hazard Severity Zones in LRA as Recommended by CAL FIRE, https://osfm.fire.ca.gov/media/5830/los_angeles.pdf. Accessed May 2021.

and expected burn probabilities, which are used to quantify the likelihood and nature of vegetation fire exposure to buildings. In late 2005, the California Building Commission adopted California Building Code Chapter 7A, which became effective in 2008 and requires new buildings in VHFHSZs to use ignition resistant construction methods and materials. These new codes include provisions to improve the ignition resistance of buildings, especially from firebrands. VHFHSZs are used by building officials for new building permits in LRAs.[17] The zones are also used to identify property whose owners must comply with natural hazards disclosure requirements at the time of property sale and 100-foot defensible space clearance requirements.

Los Angeles County Fire Department 2017-2021 Strategic Plan: Act, Action, and Accomplish, and Los Angeles County Disaster Routes

The Los Angeles County Fire Department provides fire protection services to the county's 59 cities, as well as unincorporated county areas. The 2017-2021 County Strategic Plan is broken down into 3 main goals: Goal 1) Emergency Operations, Goal 2) Public Service, and Goal 3) Organizational Effectiveness. Emergency Operations works to address societal challenges through non-traditional service delivery; Public Services addresses catastrophic preparedness and community initiatives; and Organizational Effectiveness addresses current and future department needs (staffing, training, equipment, facilities, information technology, etc.).[18]

Los Angeles County Disaster routes are freeways, highways, or arterial routes that are pre-identified for use to bring in emergency personnel, equipment, and supplies to an affected area at the time of a disaster or emergency.[19]

City of Los Angeles Fire Department Strategic Plan 2018-2020: A Safer City 2.0

A Safer City 2.0[20] has four areas of focus that align with the Mayor's priority outcomes: A Safe City, A Well Run City Government, A Livable and Sustainable City, and A Prosperous City. Within these focus areas are five goals: Goal 1) Provide exceptional public safety and emergency service; Goal 2) Embrace a healthy, safe and productive work environment; Goal 3) Implement and capitalize on advanced technology; Goal 4) Enhance LAFD sustainability and community resilience; and Goal 5) Increase opportunities for personal growth and professional development. Each of these goals include a number of strategies aimed at

[17] City of Los Angeles, Los Angeles Fire Department, Very High Fire Hazard Severity Zone Map, https://www.lafd.org/fire-prevention/brush/fire-zone/fire-zone-map. Accessed May 2021.
[18] Los Angeles County Fire Department, 2017-2021 Strategic Plan: "Act, Action, Accomplish," June 21, 2018. https://fire.lacounty.gov/wp-content/uploads/2019/09/LACoFD-Strategic-Plan-2017-2021.pdf. Accessed May 2021.
[19] Los Angeles County Operational Area, Disaster Routes and maps. https://dpw.lacounty.gov/dsg/DisasterRoutes/. Accessed May 2021. North Area Map, https://dpw.lacounty.gov/dsg/DisasterRoutes/map/disaster_rdm-North.pdf. Accessed May 2021.South OA Map, https://dpw.lacounty.gov/dsg/DisasterRoutes/map/disaster_rdm-South.pdf. Accessed May 2021.
[20] City of Los Angeles, Los Angeles Fire Department, Strategic Plan 2018-2020: A Safer City 2.0, https://issuu.com/lafd/docs/strategic_plan_final_2018.02.09?e=17034503/59029441. Accessed May 2021.

providing communities and the public with fire protection, emergency medical services, preservation of life and property, and promoting public safety.

City of Los Angeles LAFD Fire Life Safety Plan Review

The LAFD reviews new construction, change of use, and remodeling projects for buildings and structures containing State Fire Marshal occupancy. Plans are reviewed for compliance with national, state, and city codes and standards. Fire/Life safety systems such as fire alarm and two-way radio communication for all buildings and occupancies are also reviewed.

City of Los Angeles LAFD Red Flag Restricted Parking Program

The LAFD and Department of Transportation created the Red Flag Restricted Parking program to increase public safety by removing illegally parked vehicles in posted locations within the VHFHSZ. The goal of this program is to educate the public on the potential hazards associated with a fast-moving brush fire, and the importance of keeping roadways clear and traffic moving. This program was implemented with the assistance of the City Council to remove vehicles that create a hazardous condition on Red Flag Days. Critical areas, including very narrow roads, hairpin turns, tight curves, where parked vehicles could delay citizens trying to evacuate and fire companies attempting to gain access during a Brush Incident were identified by Station Commanders. The Department of Transportation made 1700 new signs and posted them in these identified areas, since January 1, 2006.

City of Los Angeles Emergency Operations Plan: Brush Fire Hazard Specific Annex

The Emergency Management Department (EMD) leads the City's effort in the development of citywide emergency plans, revises and distributes the Emergency Operations Master Plan and Master Procedures and Annexes and updates and disseminates guidelines for the emergency response and recovery plans. The department also reviews and tests departmental emergency plans to ensure City departments are ready to fulfill their respective emergency missions. The Brush Fire Hazard Specific Annex[21] was developed in cooperation and with input from the City departments with primary response/support activities, as well as input from appropriate non-City agencies with identified activities related to brush fire emergencies, and is reviewed every other year. This Annex details the City's responsibilities for response to brush fires. It identifies roles and responsibilities for appropriate departments, procedures for rapid notification to City departments and the public in the event of brush fire related emergencies, and ensures consistency with federal, state, county, and other local governments' emergency response plans and operations.

[21] City of Los Angeles, Emergency Management Department, Emergency Operations Plan, Brush Fire Hazard Specific Annex, March 2018, https://emergency.lacity.org/sites/g/files/wph496/f/Brush%20Fire%20Annex%202018_5.pdf. Accessed May 2021.

City of Los Angeles 2018 Local Hazard Mitigation Plan

The City of Los Angeles Hazard Mitigation Plan (HMP) aims to lessen the vulnerability to disasters, and demonstrate the City's commitment to reducing risks from natural hazards. The HMP serves as a guide for decision makers as they commit City resources to minimize the effects of natural hazards. The HMP is intended to integrate with existing planning mechanisms including building and zoning regulations, long-range planning mechanisms, and environmental planning. The planning process includes conducting a thorough hazard vulnerability analysis, creating community disaster mitigation priorities, and developing subsequent mitigation strategies and projects.[22]

Los Angeles Municipal Code

The City of Los Angeles Fire Code, Article 7, Chapter V of the Los Angeles Municipal Code (LAMC), consists of the California Fire Code with Los Angeles–specific amendments that are further restrictive. The Fire Code establishes the minimum requirements consistent with nationally recognized good practices for providing a reasonable level of life safety and property protection for the hazards of fire, explosion, panic, or dangerous conditions in new and existing buildings, structures, or premises, and includes minimum requirements for driveway widths, the creation and maintenance of wildfire buffers, sprinklers, and alarms. Provisions in the Fire Code reinforce State safety regulation by defining standards for the design of fire access roads (Section 503), mandating fire safety procedures for the construction and demolition of structures (Section 3301-3317), regulating the types of activities permitted within a VHFHSZ (Section 4908), and requiring that property owners in a VHFHSZ clear brush and other native vegetation within a 200-foot radius of a building (Section 57.322). The Fire Code also establishes requirements to provide a reasonable level of safety to firefighters and emergency responders during emergency operations.[23] Properties located in VHFHSZs as mapped by CAL FIRE and Fire Brush Clearance Zones are required to minimize fire risks during the high fire season through vegetation clearance, maintenance of landscape vegetation to minimize fuel supply that would spread the intensity of a fire, compliance with provisions for emergency vehicle access, use of approved building materials and design, and compliance with LAFD brush clearance requirements pursuant to the Fire Code. Section 12.22A.33 provides various development standards for Accessory Dwelling Units (ADUs) including an approved automatic fire sprinkler system, in compliance with the Los Angeles Plumbing Code, if the primary residence includes fire sprinklers.

Section 13.16 was added into the LAMC as Ordinance No. 181,624, the Baseline Hillside Ordinance (BHO), in 2011. This section provides procedures and guidelines for the establishment of Hillside Standards (HS) Overlay Districts in single-family residential neighborhoods in designated Hillside Areas throughout the

[22] City of Los Angeles, 2018 Local Hazard Mitigation Plan. https://emergency.lacity.org/about/hazard-mitigation-plan/plan-documents. Accessed July 2021.
[23] LAMC 57.101.3; https://www.lafd.org/fire-prevention/fire-code. Accessed May 2021.

City. The purpose of the HS Overlay District is to permit residential floor area, height, and grading limits in the R1, RS, RE, and RA zones to be higher or lower than normally permitted by the LAMC in areas where the proposed overlay will further enhance the existing scale of homes and/or help to preserve the existing character of the neighborhood as effectively as the limitations or requirements otherwise established in the LAMC; and where these changes will be consistent with the policies and objectives set forth in the applicable Community Plan.

Section 57.106.5.2 provides that the Fire Chief shall have the authority to require drawings, plans, or sketches as may be necessary to identify: (1) occupancy access points; (2) devices and systems; (3) utility controls; (4) stairwells; and (5) hazardous materials/waste.

Section 57.118 establishes LAFD's fire/life safety plan review and LAFD's fire/life safety inspection for new construction projects.

Section 57.408 requires the preparation of an Emergency Plan that establishes dedicated personnel and emergency procedures to assist the LAFD during an emergency incident, and establishes a drill procedure to prepare for emergency incidents. The Emergency Plan would also establish an on-site emergency assistance center and establish procedures to be followed during an emergency incident. The Emergency Plan must be submitted to the LAFD for approval prior to implementation, and must be submitted annually (and revised if required by the LAFD).

Section 57.4704.4.3.1 of the LAMC requires that the Smoke detectors required by Chapter 9 of the LAMC (Building Code) be maintained in dependable operating condition and tested every six months or as required by the Fire Chief. An accurate record of such tests must be kept by the owner, manager, or person in charge of the property, and such records must be open to examination by the Fire Chief.

Section 57.507.3.2 addresses land use-based requirements for fire hydrant spacing and type. Regardless of land use, every first story of a residential, commercial, or industrial building must be within 300 feet of an approved hydrant. The site-specific number and location of hydrants would be determined as part of LAFD's fire/life safety plan review for each development.

LAMC Chapter V, Article 7, Section 57.512.1 provides that response distances, which are based on land use and fire flow requirements and range from 0.75 mile for an engine company to 2 miles for a truck company, shall comply with Section 57.507.3.3. Where a site's response distance is greater than permitted, all structures must have automatic fire sprinkler systems.

City of Los Angeles General Plan: Safety Element

The City of Los Angeles General Plan Safety Element, adopted on November 26, 1996, provides a broad framework for understanding the relationship between hazard mitigation, response to a natural disaster and initial recovery from a natural disaster. The Safety Element includes goals, objectives, policies, and programs, included in Table 4.17-1, as well as a map of Selected Wildfire Hazard Areas within the City of Los Angeles.[24] The programs outlined are those of the City Emergency Operations Organization (EOO), the city agency/program that implements the Safety Element.[25] The Safety Element is undergoing a targeted update as part of the Proposed Project; however, the below Goals, Objectives and Policies will remain.[26]

Table 4.17-1 Relevant General Plan Fire Hazard Objectives, Policies, and Implementation

Relevant General Plan Fire Hazard Objectives, Policies, and Implementation	
Goal 1: A city where potential injury, loss of life, property damage and disruption of the social and economic life of the City due to fire, water related hazard, seismic event, geologic conditions or release of hazardous materials disasters is minimized.	
Objective 1.1: Implement comprehensive hazard mitigation plans and programs that are integrated with each other and with the City's comprehensive emergency response and recovery plans and programs.	
Policy 1.1.1	Coordination. Coordinate information gathering, program formulation and program implementation between City agencies, other jurisdictions and appropriate public and private entities to achieve the maximum mutual benefit with the greatest efficiency of funds and staff. [All Emergency Operations Organization (EOO) hazard mitigation programs involving cooperative efforts between entities implement this policy.]
Policy 1.1.2	Disruption reduction. Reduce, to the greatest extent feasible and within the resources available, potential critical facility, governmental functions, infrastructure and information resource disruption due to natural disaster. [All EOO programs involving mitigation of disruption of essential infrastructure, services and governmental operations systems and prepare personnel for quickly reestablishing damaged systems implement this policy.]
Policy 1.1.5	Risk reduction. Reduce potential risk hazards due to natural disaster to the greatest extent feasible within the resources available, including provision of information and training. [All programs that incorporate current data, knowledge and technology in revising and implementing plans (including this Safety Element), codes, standards and procedures that are designed to reduce potential hazards and risk from hazards potentially associated with natural disasters implement this policy.]

[24] City of Los Angeles Department of City Planning, Safety Element, Exhibit D, page 53, Originally adopted November 26, 1996. Accessed May 2021.
[25] City of Los Angeles Department of City Planning, Safety Element, Exhibit H, page 61, Originally adopted November 26, 1996. Accessed May 2021.
[26] Some targeted revisions to the goals, policies and objectives listed in Table 4.17-1 are proposed as part of the update to the Safety Element. Whereas the policies within the current Safety Element each list a corresponding EOO program in parentheticals, the updated plan includes a listing of programs in a new chapter. These programs cover the actions listed in parentheticals in Table 4.17-1, with added specificity on future actions and interdepartmental responsibilities. Additionally, a new objective has been added under Goal 1 to reflect the City's work to mitigate the advance of climate change, therefore reducing the frequency and severity of climate impacts including wildfires.

Relevant General Plan Fire Hazard Objectives, Policies, and Implementation	
Policy 1.1.6	State and federal regulations. Assure compliance with applicable state and federal planning and development regulations, *e.g.*, Alquist-Priolo Earthquake Fault Zoning Act, State Mapping Act and Cobey-Alquist Flood Plain Management Act. [All EOO natural hazard enforcement and implementation programs relative to non-City regulations implement this policy.]
Goal 2 A city that responds with the maximum feasible speed and efficiency to disaster events so as to minimize injury, loss of life, property damage and disruption of the social and economic life of the City and its immediate environs.	
Objective 2.1: Develop and implement comprehensive emergency response plans and programs that are integrated with each other and with the City's comprehensive hazard mitigation and recovery plans and programs.	
Policy 2.1.1	Coordination. Coordinate program formulation and implementation between City agencies, adjacent jurisdictions and appropriate private and public entities so as to achieve, to the greatest extent feasible and within the resources available, the maximum mutual benefit with the greatest efficiency of funds and staff. [All EOO response programs involving cooperative efforts between entities implement this policy.]
Policy 2.1.2	Health and environmental protection. Develop and implement procedures to protect the environment and public, including animal control and care, to the greatest extent feasible within the resources available, from potential health and safety hazards associated with hazard mitigation and disaster recovery efforts. [All EOO emergency response and recovery programs that mitigate environmental impacts or provide care and control of animals injured or released by an emergency situation implement this policy.]
Policy 2.1.4	Interim procedures. Develop and implement pre-disaster plans for interim evacuation, sheltering and public aid for disaster victims displaced from homes and for disrupted businesses, within the resources available. Plans should include provisions to assist businesses which provide significant services to the public and plans for reestablishment of the financial viability of the City. [All EOO response and recovery programs involving evacuation and provision of temporary services to victims of an emergency event and any planning and training related thereto implement this policy.]
Policy 2.1.5	Response. Develop, implement and continue to improve the City's ability to respond to emergency events. [All EOO emergency response programs and all hazard mitigation and disaster recovery programs related to protecting and reestablishing communications and other infrastructure, service and governmental operations systems implement this policy.]
Source: City of Los Angeles General Plan Safety Element, 1996	

4.17.3 ENVIRONMENTAL IMPACTS

Thresholds of Significance

In accordance with Appendix G of the CEQA Guidelines, wildfire impacts would be significant if housing development accommodated by the Housing Element Update was located in or near state responsibility areas (SRA) or lands classified as VHFHSZ, the Housing Element Update would:

- **Threshold 4.17-1:** Substantially impair an adopted emergency response plan or emergency evacuation plan;
- **Threshold 4.17-2:** Due to slope, prevailing winds, and other factors, exacerbate wildfire risks, and thereby expose project occupants to, pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire;
- **Threshold 4.17-3:** Require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines, or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment;
- **Threshold 4.17-4:** Expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes.

In addition, as identified in the Hazards and Hazardous Materials section of the Appendix G of the CEQA Guidelines, the Housing Element Update's impacts would be significant if it would:

- **Threshold 14.17-5:** Expose people or structures, either directly or indirectly, to a significant risk of loss, injury, or death involving wildland fires.

As discussed in the Initial Study, the potential impacts associated with wildfires were found to be less than significant; however, due to the public comments received during the scoping period, the thresholds above have been brought forward to the EIR for a detailed analysis.

Methodology

This impact analysis addresses the potential of future build out of the RHNA under the Housing Element Update to create a significant risk of wildfires. The evaluation was performed based on current environmental conditions in the City, specifically in SRA lands and VHFHSZs, information in environmental databases, including CAL FIRE's Fire Hazard Severity Zones Maps, applicable regulations and guidelines, and consideration of the potential for housing development accommodated by the Housing Element Update to be built in areas designated as SRA lands or VHFHSZs.

Project Impacts and Mitigation Measures

Threshold 4.17-1	If located in or near state responsibility areas or lands classified as very high fire hazard severity zones, would housing development accommodated by the Housing Element Update substantially impair an adopted emergency response plan or emergency evacuation plan?

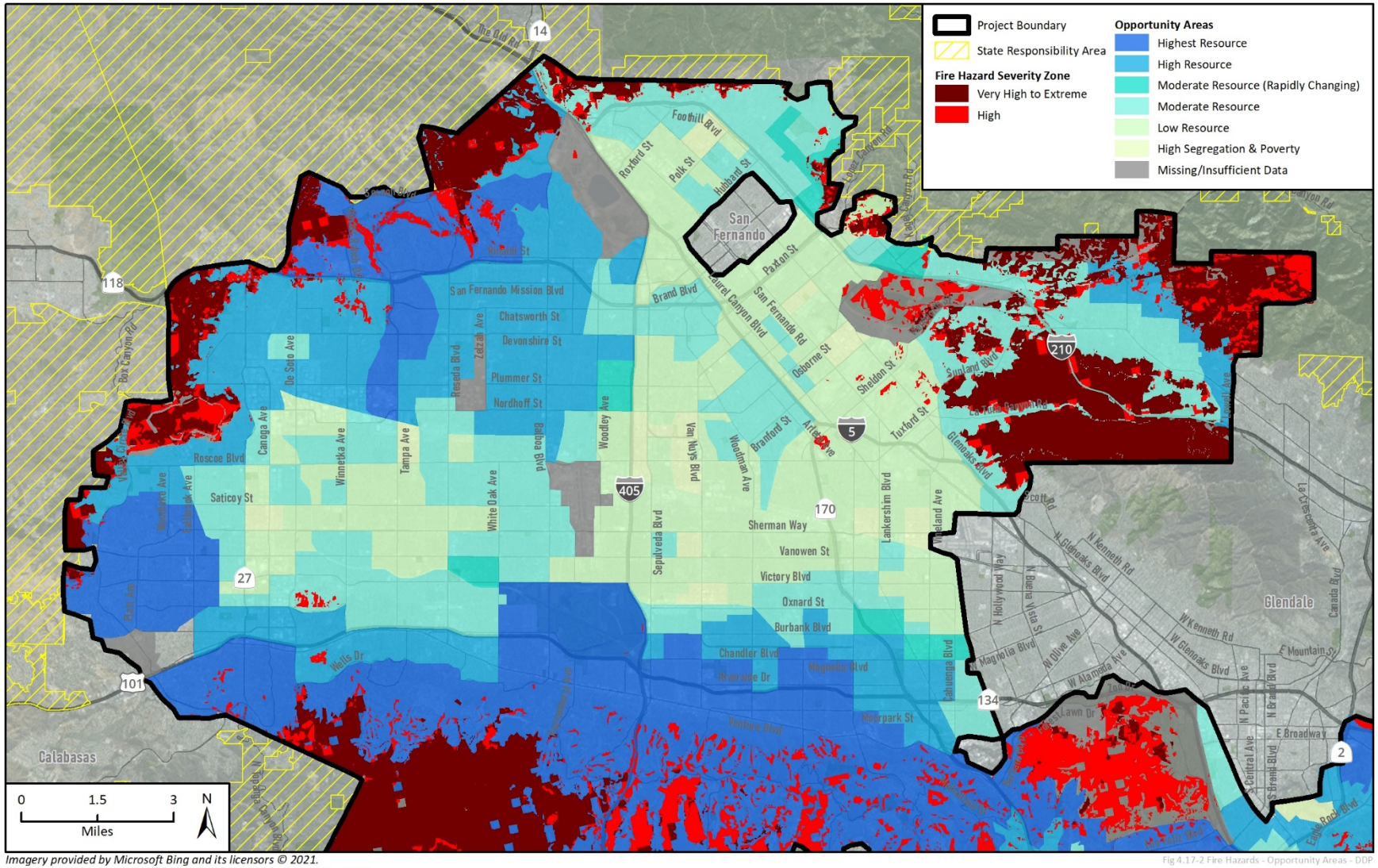
Impact 4.17-1 The Housing Element Update would generally direct development away from areas of the City designated as VHFHSZs or in or near SRAs. However, some areas designated as VHFHSZs or in or near SRAs are currently zoned for residential use and could be subject to future development accommodated by the Housing Element Update. Generally, the City's extensive regulatory and review scheme would be expected to avoid impacts. However, based on unusual site-specific, roadway or project aspects, development in such areas would have the potential to cause the impairment of an adopted emergency response plan or emergency evacuation plan due to the temporary obstruction of roads associated with construction activities on or near a designated emergency route.[27] For those projects, implementation of Mitigation Measure 4.17-1 and 4.12-1(b) would be expected reduce the potential for obstruction of roadways by regulating construction-related staging and parking for projects in hillside areas. However, imposition of the mitigation measures on all projects is not feasible and even with existing regulations and imposition of the measures, build out of the RHNA in or near an SRA or VHFSHZ areas could still result in a significant impact. Therefore, impacts would be ***significant and unavoidable***.

Areas at risk for wildfire in the City are concentrated around the hillsides and mountainous areas, such as the Santa Monica, Santa Susana, and San Gabriel Mountains. The only State Responsibility Area (SRA) lands in the City are two relatively small areas near the northeastern and northwestern boundaries of the City within the San Gabriel Mountains (CAL FIRE 2011). These areas and the areas immediately adjacent

[27] California Government code section 65302(g)(1) specifies the need to plan for swift evacuation in the event of a fire or other emergency. The City of Los Angeles includes a wide range of physical environments and dramatic differences in population density based on the time of day or day of the week. To better accommodate the variety of evacuation scenarios, the city has developed a dynamic approach to evacuation response, one that can respond to different conditions. As specified in the City EOP Evacuations Annex "primary evaluation routes consist of the major interstates, highways, and primary arterials within the City and Los Angeles County." However, in response to a more localized emergency, like a hillside wildfire, the LAFD works in coordination with the Los Angeles Department of Transportation and Los Angeles Police Department to identify the most appropriate local egress option and direct individuals to those routes. Potential routes have been pre-selected based on a number of considerations, but maps of potential evacuation routes are not shared publicly to avoid any disruption to potential routes in the event of an emergency. The related Transportation Appendix and Evacuation Annex of the EOP detail how to facilitate movement of the public and incident related resources during an emergency event.

are primarily zoned for low-density, single-family residential uses. The geographic distribution of development would largely occur in areas of the City that are currently zoned for multi-family residential and commercial development and designated as High or Very High Resource Opportunity Areas. Figure 4.17-1**a,** Figure 4.17-1**b, and** Figure 4.17-1c depict the SRA and VHFHSZ in relation to Opportunity Areas. Figure 4.17-2a, Figure 4.17-2b, and Figure 4.17-2c depict the SRA and VHFHSZs relative to the City's current zoning. Under the Housing Element Update, the Rezoning Program will prioritize areas near transit, jobs, and in High and Very High Resource Areas; no rezones within environmentally sensitive areas such as the SRA and VHFHSZs are proposed. Individual project development sites may be located in any area where the zoning currently permits residential uses, including lower density residential sites in the vicinity of VHFHSZs or in or near an SRA. The Housing Element Update could potentially result in the relocation of the wildland-urban interface if development were to occur directly adjacent to the interface in areas that are currently considered "wildland." However, it is not expected that build out of the RHNA under the Housing Element Update would contribute to the critical fire environment because it would not create additional wildland spaces and therefore would not increase the length of the urban-wildland interface. As documented by Keeley and Syphard in the International Journal of Wildland Fire (2018), in recent decades (since circa 1980), human-caused fires have been negatively correlated with population density, meaning more developed areas are less likely to be affected by wildfires throughout the State (Keeley and Syphard 2018) and suggesting that additional development would not necessarily lead to more wildfire risk. Fuel modification requirements dictate permanent vegetation management standards surrounding buildings, particularly in area in or near the SRA or a VHFHSZ. In addition, the California Building Standards Code and Los Angeles Municipal Code include minimum requirements for driveway widths, the creation and maintenance of wildfire buffers, sprinklers, and alarms. As such, development is not likely or anticipated on a level that would significantly conflict with an adopted emergency response plan or emergency evacuation plan.

Figure 4.17-1a State Responsibility Area and Fire Hazard Severity Zones Relative to Resource Opportunity Areas – Northern Portion of Los Angeles



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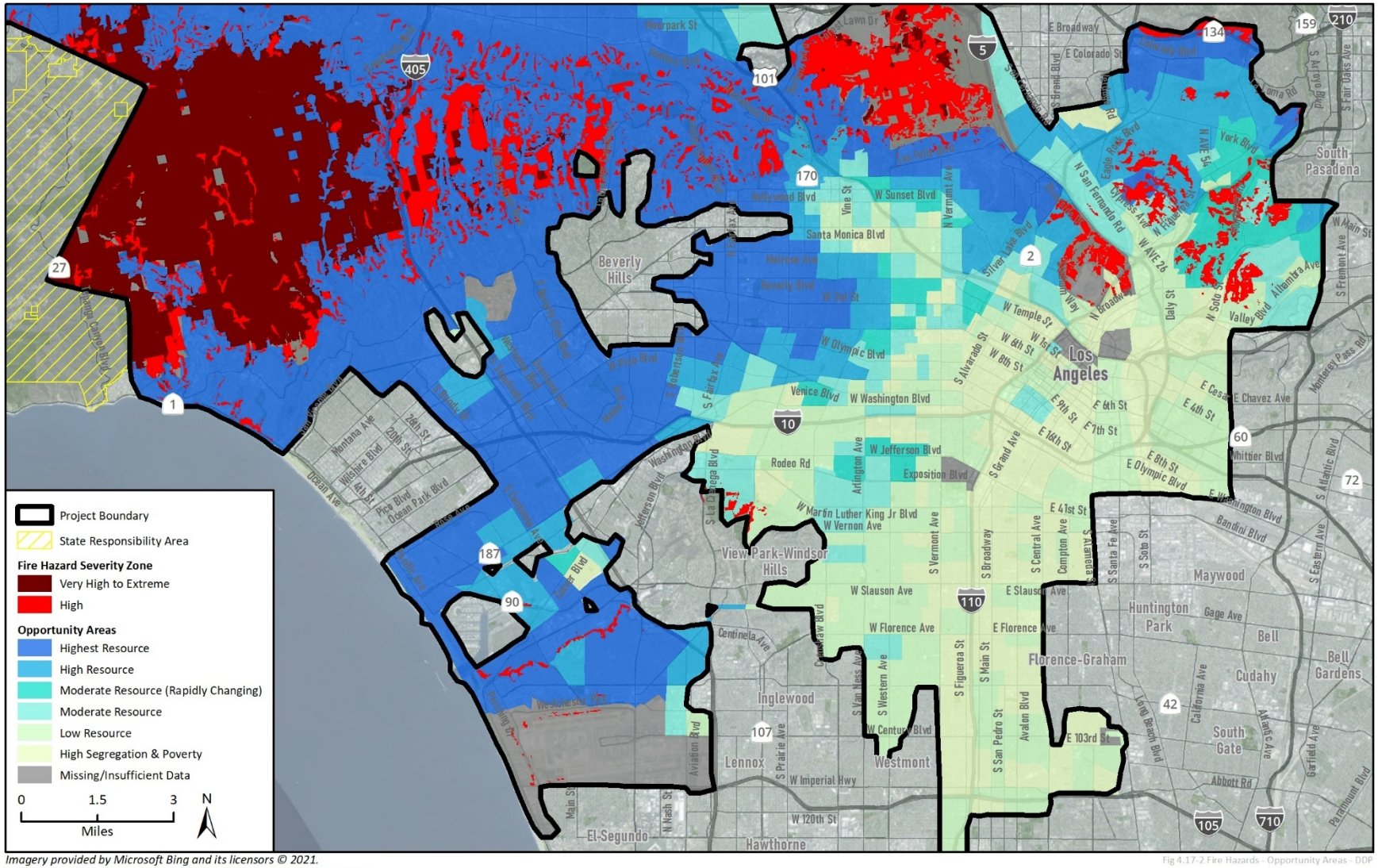
Additional data provided by CalFire, 2020 and City of Los Angeles, 2021.

Fig 4.17-2 Fire Hazards - Opportunity Areas - DDP

Figure 4.17-1b State Responsibility Area and Fire Hazard Severity Zones Relative to Resource Opportunity Areas – Central Portion of Los Angeles



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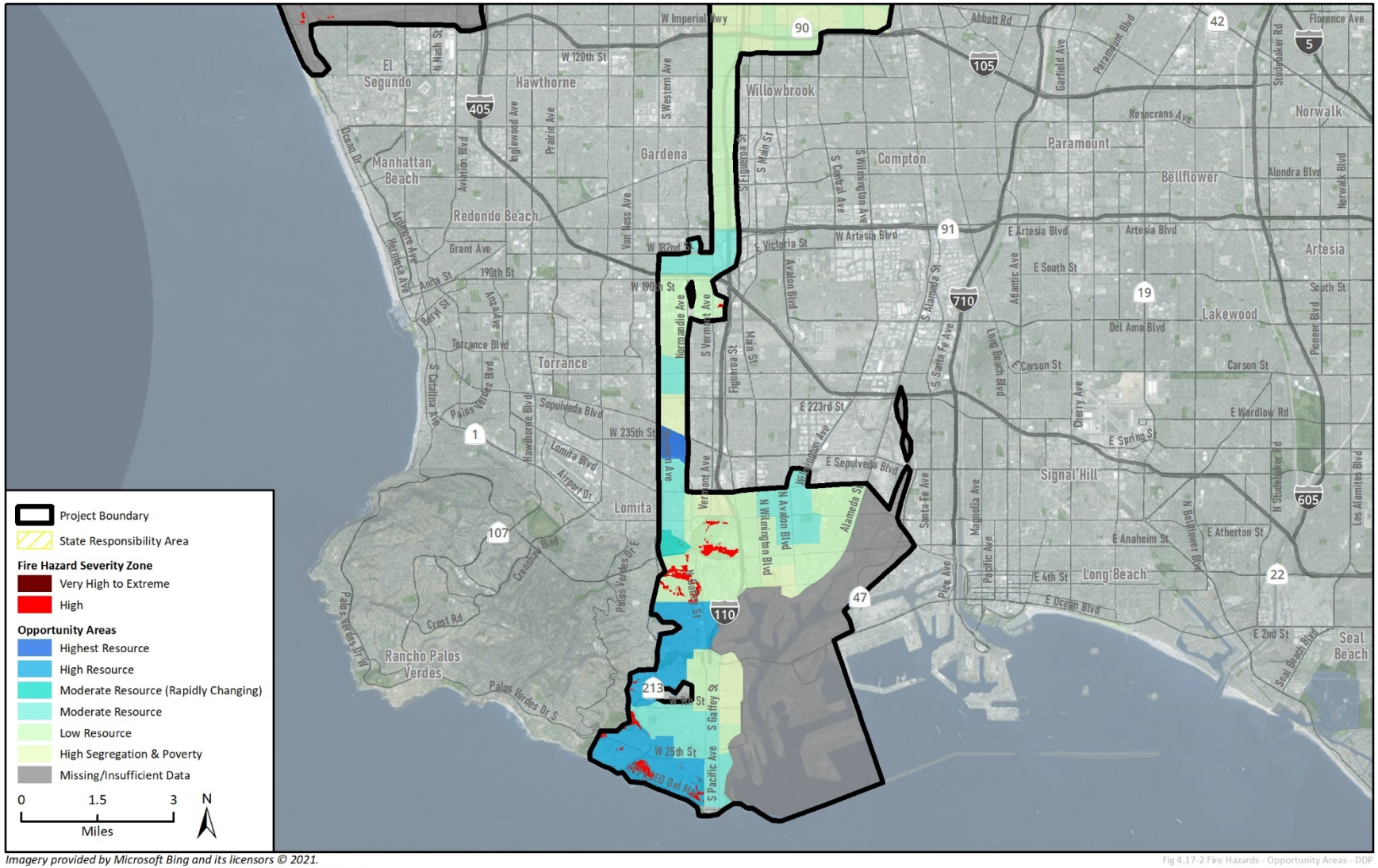
Additional data provided by CalFire, 2020 and City of Los Angeles, 2021.

Fig 4.17-2 Fire Hazards - Opportunity Areas - DDP

Figure 4.17-1c State Responsibility Area and Fire Hazard Severity Zones Relative to Resource Opportunity Areas – Southern Portion of Los Angeles



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Additional data provided by CalFire, 2020 and City of Los Angeles, 2021.

Fig 4.17-2 Fire Hazards - Opportunity Areas - DDP

Figure 4.17-2a State Responsibility Area and Fire Hazard Severity Zones Relative to Zoning– Northern Portion of Los Angeles

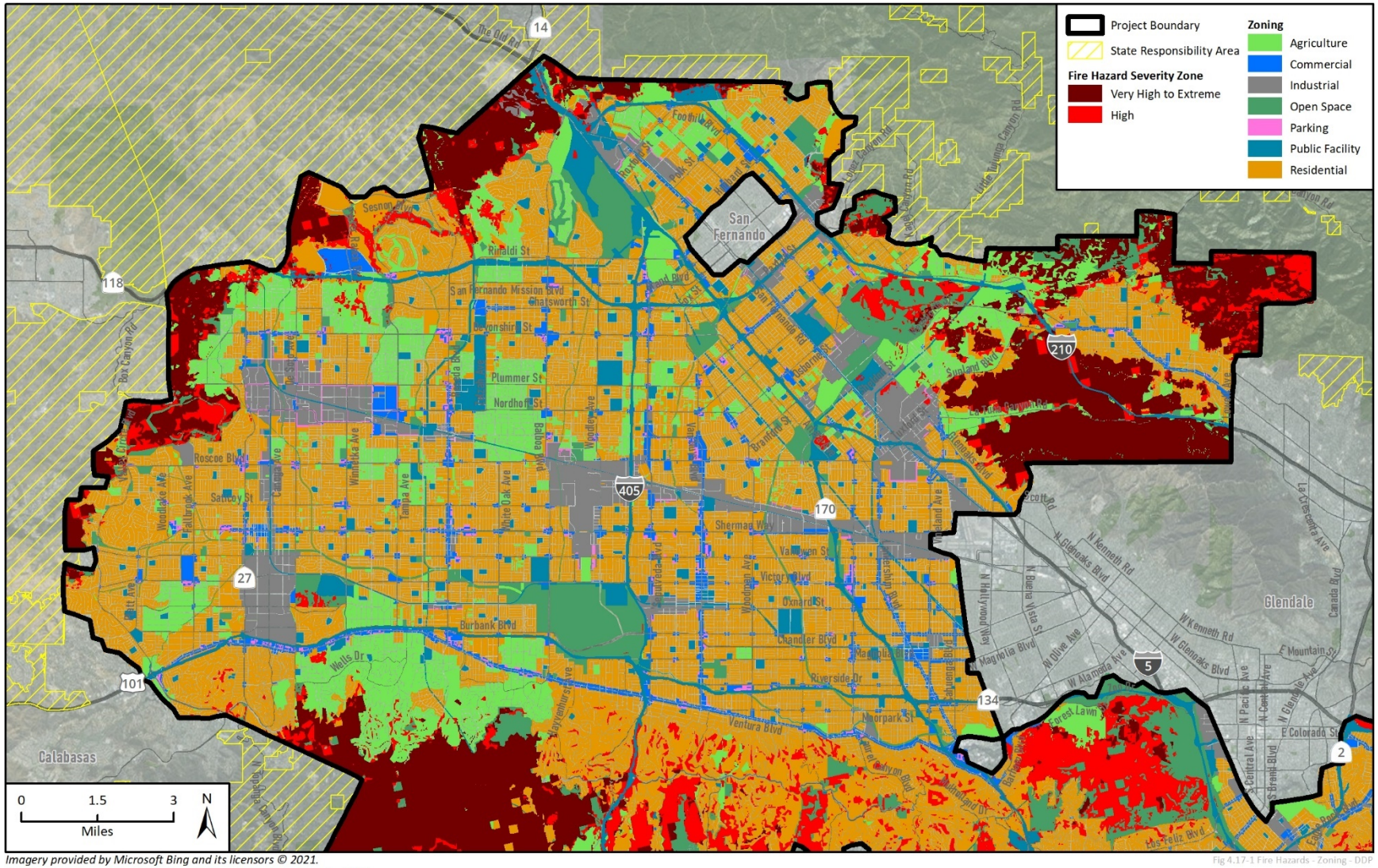
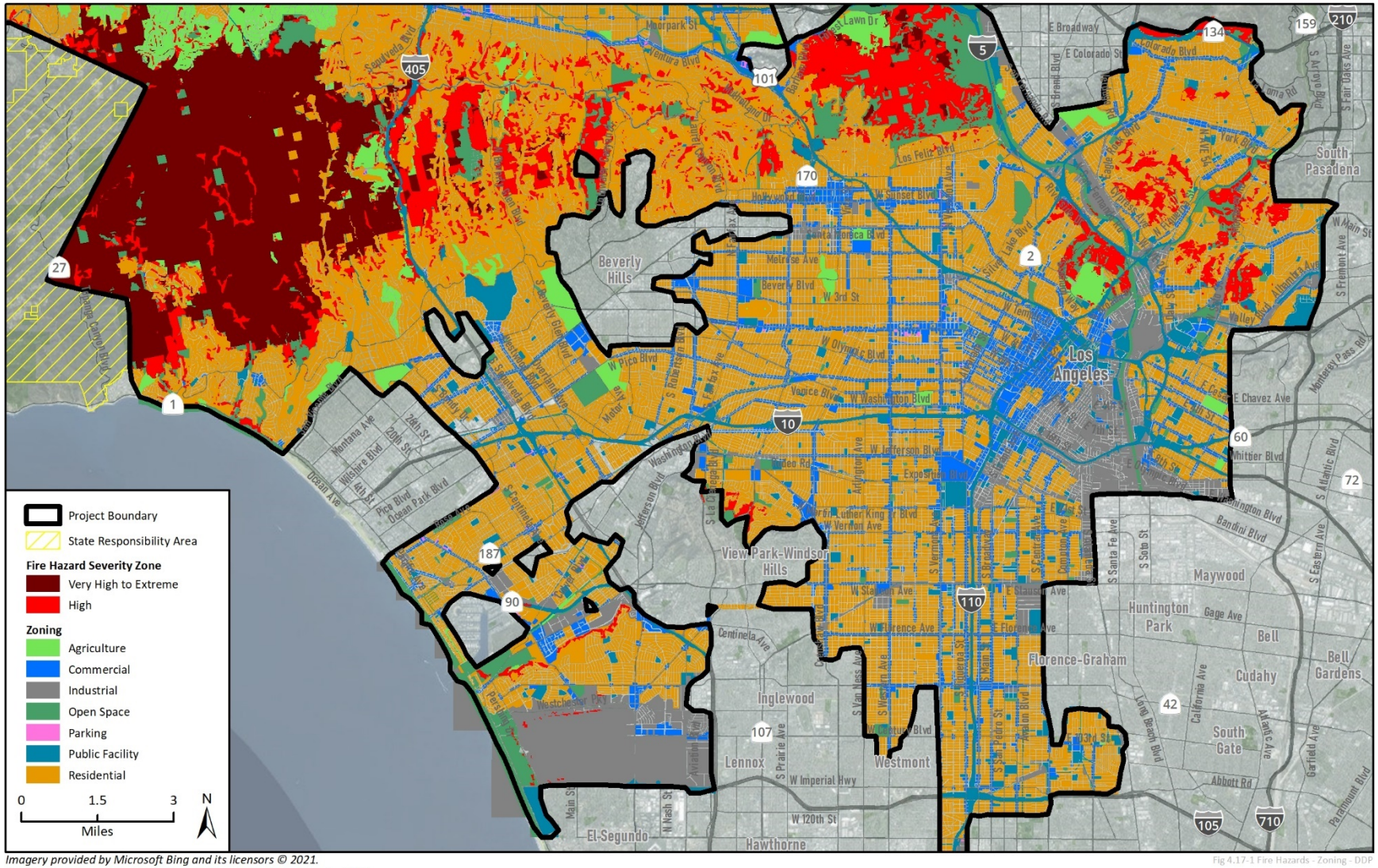


Figure 4.17-2b State Responsibility Area and Fire Hazard Severity Zones Relative to Zoning– Central Portion of Los Angeles



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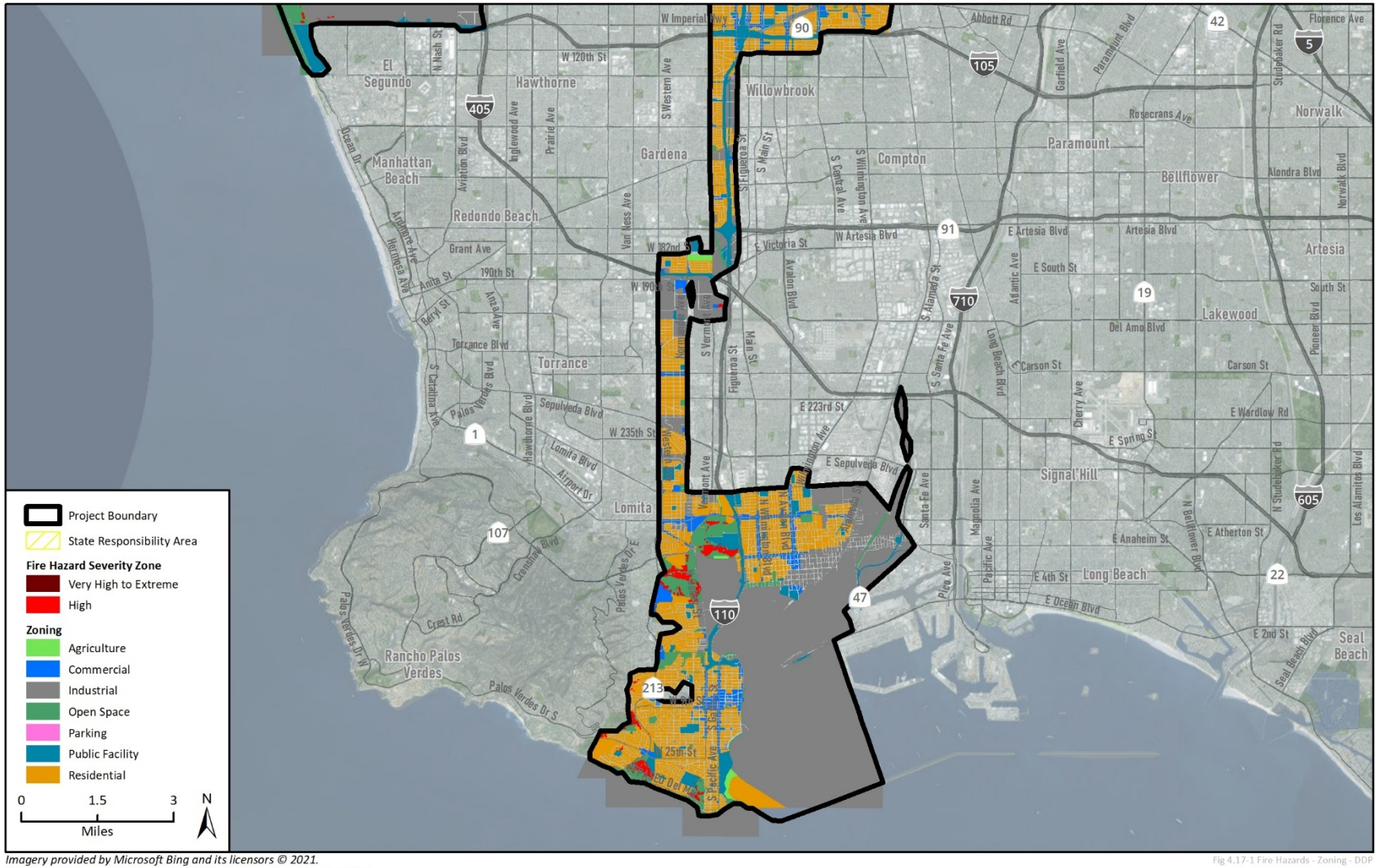
Additional data provided by CalFire, 2020 and City of Los Angeles, 2021.

Fig 4.17-1 Fire Hazards - Zoning - DDP

Figure 4.17-2c State Responsibility Area and Fire Hazard Severity Zones Relative to Zoning– Southern Portion of Los Angeles



The City and County have designated freeway, highway, or arterial routes as Disaster Routes for use in the event of a large-scale emergency. These routes would be used by emergency personnel, and to carry equipment and supplies to access areas affected by an emergency to minimize the impact to people, properties, and the environment. In the event of a disaster, the clearing, repairing, and restoration of Disaster Routes would be prioritized over other roads. Generally, Interstate and State highways are designated as Primary Disaster Routes and major arterials as Secondary Disaster Routes (Los Angeles County Department of Public Works 2021a; 2021b; 2021c).

The County of Los Angeles developed the ERP to ensure management and allocation of resources during large-scale disasters requiring an extraordinary emergency response. The purpose of the plan is to coordinate resources of the County government and other municipalities as a single Operational Area organization capable of responding to any emergency using a Standard Emergency Management System, mutual aid, and other appropriate response procedures. In the event of a wildfire, implementation of the County's ERP would coordinate all the facilities and personnel of County government, along with the jurisdictional resources of the cities and special districts within the County, into an efficient organization capable of managing emergency evacuation for affected areas. The Los Angeles Department of Transportation and LAFD is responsible for ensuring that future development in the City would not impair adopted emergency response or evacuation plans.

Construction of individual housing developments in VHFHSZs could interfere with adopted emergency response or evacuation plans as a result of temporary construction activities within rights-of-way. However, temporary construction barricades or other construction-related obstructions used for project development that could impede emergency access would be subject to the City's permitting process, which requires a traffic control plan subject to City review and approval. Additionally, illegally parked vehicles in VHFHSZ would be removed per LAFD's Red Flag Restricted Parking Program to assist in preventing hazardous conditions on Red Flag Days. Implementation of these plans would limit the extent to which development under the Housing Element Update would impair or physically interfere with adopted emergency response or evacuation procedures. As part of standard development procedures, future housing development plans in VHFHSZs would be submitted for review and approval to ensure that all new development has adequate emergency access and escape routes in compliance with existing City regulations and complies with home hardening requirements and recommendations. Furthermore, the Housing Element Update would not introduce any features or policies that would preclude implementation of, or alter, these policies and procedures.

As described in the *Project Description*, the Housing Element Update does not incorporate polices or rezoning efforts that would encourage new housing development in areas of the City classified as VHFSHZs; rather, the Rezoning Program and policies included in the Housing Element Update encourage

housing development in areas that are not classified as VHFHSZs or in or near SRAs. As discussed above and in the regulatory setting, established regulations and safety procedures have been implemented to prevent the impairment of emergency response plans and emergency evacuation plans, including through Fire Department review and approval of construction plans to ensure compliance with the Fire Code.

The types of housing units accommodated under the Housing Element Update would generally fall into five categories of development projects - multi-family residential development; single-family residential development; ADUs) mixed use development; and conversion and/or rehabilitation of existing nonresidential, residential, and mixed-use structures to be used for housing. The predominant housing type but not only type in SRA or VHFSHZ areas would be single-family homes. ADUs would also be a more common typology developed in or near an SRA or VHFHSZ, as they are allowed with single family homes. The City's ADU regulations require new construction of ADUs located both in a Hillside Area and a VHFHSZ to comply with additional requirements to address potential fire risk, including provision of an automatic fire sprinkler system, provision of one on-site parking space for the ADU, and an improved roadway of at least 20 feet in front of the subject property (LAMC 12.22 A.33(c)(4)). Multi-family developments would also be located in or near VHFHSZ and SRA areas; however, it is not anticipated that large developments would occur in these areas under the Housing Element Update due to the City's zoning.

Unlike some other impact sections, impacts related to wildfire would vary not necessarily by housing typology but by location and scale and scope of the project, specifically whether the housing project is in or near a SRA or a VHFSHZ area, and whether the project would have the potential to impair an adopted emergency response plan or emergency evacuation plan due to temporary obstruction of a right-of-way associated with construction activities and increased traffic as a result of increased development.

An example of typical analysis for a project not in an SRA or VHFSHZ would be the analysis in the SCEA for the Thatcher Yard Project, which was within 1,000 feet of a disaster route. The Thatcher Yard Project is a 54-unit multi-family residential apartment building, located in the Venice Community Plan Area. The example project's Sustainable Communities Environmental Assessment provided the following analysis and impact conclusion for this threshold:

> *A significant impact may occur if a project were to interfere with roadway operations used in conjunction with an emergency response plan or emergency evacuation plan or would generate traffic congestion that would interfere with the execution of such a plan. The SRA is the area in the State where the State of California has the primary financial responsibility for the prevention and suppression of wildland fires. The SRA is comprised of over 31 million acres across the entire State to which the CAL FIRE provides a basic level of wildland fire prevention and protection services. Lands in the SRA are based on vegetative cover and natural resource values.*

As a result of the Oakland Hills Fire of 1991, AB 337 was passed in 1992 requiring CAL FIRE to work with local governments to identify high fire hazard severity zones within local responsibility areas throughout each county in the State. In response, the City first established the Very High Fire Hazard Severity Zone (VHFHSZ) in 1999. The VHFHSZ replaced the older "Mountain Fire District" and "Buffer Zone." The VHFHSZ comprises most of the hilly and mountainous regions of the City.

The Project Site is located in a developed, urban area in the Community Plan area. The Project Site and surrounding area are relatively flat and do not contain any significant slope. The Project Site is not located in or near the State responsibility area; the nearest part of the State responsibility area is located approximately 8.3 miles to the northwest in Topanga State Park. Additionally, the Project Site is not located in a very high fire hazard severity zone; the nearest very high fire severity zone is located approximately 1.2 miles to the south in the Ballona Wetlands Ecological Reserve. None of the roadways that run adjacent to the Project Site (Thatcher Avenue, Princeton Drive, or Oxford Avenue) are identified as a disaster route by either the City, or by Los Angeles County. Lincoln Boulevard, approximately 1,000 feet east of the Project Site, is a County- and City-designated disaster route.

[Although] the Project Site is located near County- and City designated disaster routes, neither construction nor operation of the Project would impair or physically interfere with an adopted emergency response plan. Access for emergency service providers and evacuation routes would be maintained during construction and operation of the Project would not cause permanent alterations to vehicle circulation routes and patterns, or impede public access or travel upon public rights-of-way. Furthermore, …the Project would not result in any significant traffic impacts. An emergency response plan would be submitted to Los Angeles Fire Department during review of plans as part of the standard building permit process. Accordingly, the Project would have a less than significant impact on adopted emergency response plans or emergency evacuation plans as they pertain to State responsibility areas or very high fire hazard severity zones and no mitigation measures would be required. (Thatcher Yard SCEA on pages V-162 and V-163.)

The analysis in the Thatcher Yard would be expected to be similar to other housing projects in non-SRA or non-VHFSHZ areas.

Additionally, of those projects in the historical environmental case studies reviewed for this EIR in Table 4-2 that considered Wildfire impacts (added in Appendix G update in 2019), none had significant unavoidable impacts from wildfire. Only one project, which was located in a VHFHSZ required mitigation measures. Those mitigation measures are consistent with several existing regulations. The 32 Small Lot Home project, which is still pending project approval at the time this EIR was prepared and is proposed in a hillside area of the Northeast Los Angeles Community Plan, was analyzed with an MND. The MND included the following analysis and impact conclusion:

The City has designated Mission Road, Huntington Drive, and Soto Street in the Project vicinity as disaster routes. The proposed Project does not include permanent changes to a public thoroughfare and would not impair access to a route heavily relied on by emergency services. In addition, street improvements under the proposed Project would increase access and routing options for emergency service providers. Based on the above, Project impacts on emergency disaster routes would be less than significant. However, the Project site is located in a hillside area that is designated as a Very High Fire Hazard Severity Zone. During construction, there could be some temporary localized traffic interruptions which could adversely affect emergency service provider routing in the event of a wildfire, which is considered a potentially significant impact. However, the imposition of Mitigation Measure VIII-40 would reduce the impacts to less than significant. (32 Small Lot Homes Project MND on page 84)

To reduce impacts related to the impairment of an adopted emergency response plan or emergency evacuation plan for the example project, the following measure was adopted:

Mitigation Measure VIII-40, Hillside Construction Staging and Parking Plan: Prior to the issuance of a grading or building permit, the applicant shall submit a Construction Staging and Parking Plan to the Department of Building and Safety and the Fire Department for review and approval. The plan shall identify where all construction materials, equipment, and vehicles will be stored through the construction phase of the project, as well as where contractor, subcontractor, and laborers will park their vehicles so as to prevent blockage of two-way traffic on streets in the vicinity of the construction site. The Construction Staging and Parking Plan shall include, but not be limited to, the following:

- *No construction equipment or material shall be permitted to be stored within the public right-of way.*
- *If the property fronts on a designated Red Flag Street, on noticed "Red Flag" days, all the workers shall be shuttled from an off-site area, located on a non-Red Flag Street, to and from the site in order to keep roads open on Red Flag days.*
- *During the Excavation and Grading phases, only one truck hauler shall be allowed on the site at any one time. The drivers shall be required to follow the designated travel plan or approved Haul Route.*
- *Truck traffic directed to the project site for the purpose of delivering materials, construction machinery, or removal of graded soil shall be limited to off-peak traffic hours, Monday through Friday only. No truck deliveries shall be permitted on Saturdays or Sundays.*
- *All deliveries during construction shall be coordinated so that only one vendor/delivery vehicle is at the site at one time, and that a construction supervisor is present at such time.*
- *A radio operator shall be on-site to coordinate the movement of material and personnel, in order to keep the roads open for emergency vehicles, their apparatus, and neighbors.*
- *During all phases of construction, all construction vehicle parking and queuing related to the project shall be as required to the satisfaction of the Department of Building and Safety, and in substantial compliance*

with the Construction Staging and Parking Plan, except as may be modified by the Department of Building and Safety or the Fire Department. (32 Small Lot Homes Project MND, ENV-2014-3179-MND at 84.)

The above requirements are consistent with requirements imposed as regulatory compliance measures for haul route permits, under the Hillside Construction Regulations, and Red Flag Regulations in LAMC Section 80.72. In addition to the above Mitigation Measure, the following conditions of approval were proposed by the Fire Department for the project:

That prior to the recordation of the final map, a suitable arrangement shall be made satisfactory to the Fire Department, binding the subdivider and all successors to the following:

1. *Submittal of plot plans for Fire Department review and approval prior to recordation of Tract Map Action.*
2. *This project is located in the very high fire hazard severity zone and shall comply with requirements set forth in the City of Los Angeles Municipal Code 57.25.01.*
3. *Mitigating measures shall be considered. These measures shall include, but not be limited to the following:*
    a. *Boxed-in eaves.*
    b. *Single pane, double thickness (minimum 1/8" thickness) or insulated windows.*
    c. *Non-wood siding.*
    d. *Exposed wooden members shall be two inches nominal thickness.*
    e. *Noncombustible finishes.*
4. *Any required roadway improvement within the Hillside Ordinance shall be completed prior to the Fire Department signing off and building plans or building permit application.*
5. *Irrigated and managed greenbelts around the perimeter of all structures for a distance of 100 feet shall be considered as a buffer between the brush and the proposed project.*
6. *All landscaping shall use fire-resistant plants and materials. A list of such plants is available from the Fire Department.*
7. *All homes shall have noncombustible roofs. (Non-wood)*
8. *The brush in the area adjacent to the proposed development shall be cleared or thinned periodically by the homeowner's Association under supervision to the Los Angeles City Fire Department in order to reduce the risk of brush fires spreading to the homes.*
9. *Access for Fire Department apparatus and personnel to and into all structures shall be required.*

10. *The entrance or exit of all ground dwelling units shall not be more than 150 feet from the edge of a roadway of an improved street, access road, or designated fire lane.*
11. *No building or portion of a building shall be constructed more than 150 feet from the edge of a roadway of an improved street, access road, or designated fire lane.*
12. *The width of private roadways for general access use and fire lanes shall not be less than 20 feet, and the fire lane must be clear to the sky.*
13. *Adequate public and private fire hydrants shall be required.*
14. *Fire lanes, where required and dead ending streets shall terminate in a cul-de-sac or other approved turning area. No dead ending street or fire lane shall be greater than 700 feet in length or secondary access shall be required.*
15. *Where access for a given development requires accommodation of Fire Department apparatus, overhead clearance shall not be less than 14 feet.*
16. *The Fire Department may require additional vehicular access where buildings exceed 28 feet in height.*
17. *On small lot subdivisions, any lots used for access purposes shall be recorded on the final map as a "Fire Lane".*
18. *No proposed development utilizing cluster, group, or condominium design of one or two family dwellings shall be more than 150 feet from the edge of the roadway of an improved street, access road, or designated fire lane.*
19. *No framing shall be allowed until the roadway is installed to the satisfaction of the Fire Department.*
20. *Any required fire hydrants to be installed shall be fully operational and accepted by the Fire Department prior to any building construction.*
21. *All parking restrictions for fire lanes shall be posted and/or painted prior to any Temporary Certificate of Occupancy being issued.*
22. *Plans showing areas to be posted and/or painted, "FIRE LANE NO PARKING" shall be submitted and approved by the Fire Department prior to building permit application sign-off.*
23. *Electric Gates approved by the Fire Department shall be tested by the Fire Department prior to Building and Safety granting a Certificate of Occupancy.*
24. *Any roof elevation changes in excess of 3 feet may require the installation of ships ladders.*
25. *Adequate off-site public and on-site private fire hydrants may be required. Their number and location to be determined after the Fire Department's review of the plot plan.*

26. *The Fire Department may require additional roof access via parapet access roof ladders where buildings exceed 28 feet in height, and when overhead wires or other obstructions block aerial ladder access. (Staff Report for VTT No. VTT-72393-SL at p. 11.)*

Based on all of the above, the City's extensive regulations and project review scheme would ensure that impacts related to impairment of adopted emergency response plan or emergency evacuation plan would be avoided. However, based on this being a plan level analysis and the potential for unusual site-specific conditions, project specific or road specific conditions, build out of the RHNA may result in impacts. Impacts related to emergency response plan or emergency evacuation plan would be ***potentially significant***.

Mitigation Measure

Projects in a VHFSHZ or SRA must comply with Mitigation Measure 4.12-1(b) in Section 4.12, *Public Services*, where the LAFD has determined existing regulations are not adequate based on unusual site-specific conditions, roadway conditions, or project characteristics.

4.17-1 Hillside Construction Staging and Parking Plan

For discretionary projects for development located in or adjacent to an SRA or VHFHSZ, where LAFD finds it necessary to add additional conditions above existing regulations to reduce the risk of construction-related activities impairing an emergency response plan or emergency evacuation plan, prior to the issuance of a grading or building permit, the applicant shall submit a Construction Staging and Parking Plan to the Department of Building and Safety and the Fire Department for review and approval. The plan shall identify where all construction materials, equipment, and vehicles will be stored through the construction phase of the project, as well as where contractor, subcontractor, and laborers will park their vehicles so as to prevent blockage of two-way traffic on streets in the vicinity of the construction site. The Construction Staging and Parking Plan shall include, but not be limited to, the following:

- No construction equipment or material shall be permitted to be stored within the public right-of-way.
- If the property fronts on a designated Red Flag Street, on noticed "Red Flag" days, all workers shall be shuttled from an off-site area, located on a non-Red Flag Street, to and from the site in order to keep roads open on Red Flag days.

- During the Excavation and Grading phases, only one truck hauler shall be allowed on the site at any one time. The drivers shall be required to follow the designated travel plan or approved Haul Route.
- Truck traffic directed to the project site for the purpose of delivering materials, construction-machinery, or removal of graded soil shall be limited to off-peak traffic hours, Monday through Friday only. No truck deliveries shall be permitted on Saturdays or Sundays.
- All deliveries during construction shall be coordinated so that only one vendor/delivery vehicle is at the site at one time, and that a construction supervisor is present at such time.
- A radio operator shall be on-site to coordinate the movement of material and personnel, in order to keep the roads open for emergency vehicles, their apparatus, and neighbors.
- During all phases of construction, all construction vehicle parking and queuing related to the project shall be as required to the satisfaction of the Department of Building and Safety, and in substantial compliance with the Construction Staging and Parking Plan, except as may be modified by the Department of Building and Safety or the Fire Department.

Significance After Mitigation

Mitigation Measure 4.17-1 as well as Mitigation Measure 4.12-1b would be expected to reduce the risk of construction-related activities impairing an emergency response plan or emergency evacuation plan for those projects LAFD finds pose an unusual threat that existing regulations do not address by limiting parking on streets in areas subject to fire-hazard-related parking restrictions, limiting the amount of heavy machinery on a development site at a given time, regulating traffic related to construction and deliveries, and installing personnel to coordinate traffic to and from the development site. However, imposition of the mitigation measure on all ministerial projects is infeasible based on resource requirements and for some development projects even with implementation of the mitigation measures impacts may result from unusual site-specific or road conditions, or project characteristics. Based on this, impacts would be ***significant and unavoidable***.

Threshold 4.17-2	If located in or near state responsibility areas or lands classified as very high fire hazard severity zones, would housing development accommodated by the Housing Element Update, due to slope, prevailing winds, and other factors, exacerbate wildfire risks and thereby expose project occupants to pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire?
Threshold 4.17-4	If located in or near state responsibility areas or lands classified as very high fire hazard severity zones, would housing development accommodated by the Housing Element Update expose people or structures to significant risks, including downslopes or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes?

Impacts 4.17-2 and -4 The Housing Element Update would generally direct development away from hillside areas with fire hazards, and new development would be required to comply with extensive regulations and fire safety provisions in the LAMC, including the Fire Code. Based on the regulatory scheme and project review process with LAFD, impacts should be avoided. Imposition of Mitigation Measures 4.12-1(a) through 4.12-1(d) where found necessary based on unusual site conditions or project characteristics should further reduce impacts to less than significant. However, it remains possible that even with existing regulations or imposition of mitigation measures, construction or other human activities related to development in or near an SRA or VHFHSZ of build-out of the RHNA could cause a wildfire in an area where slopes, winds, or other conditions could exacerbate the risk of exposure to pollutants, or where wildfires could expose people and structures to increased risks due to flooding or landslides.. Impacts would be ***significant and unavoidable***.

Portions of the City are subject to wildland fire risk, primarily in areas where single-family residential development abuts the undeveloped hillsides of the Santa Monica, San Gabriel, and Santa Susana Mountains (see Figures 4.17-1a, 4.17-1b, and 4.17-1c and Figures 4.17-2a, 4.17-2b, and 4.17-2c) (City of Los Angeles 1996; CAL FIRE 2021). Although these figures show VHFHSZs in High Resource areas, the Rezoning Program will prioritize areas near transit, jobs, and in High and Very High Resource Areas; no rezones within environmentally sensitive areas such as the SRA and VHFHSZs are proposed**.** Properties located in VHFHSZs as mapped by CAL FIRE and Fire Brush Clearance Zones are required to minimize fire risks during the high fire season through vegetation clearance, maintenance of landscape vegetation to minimize fuel supply that would spread the intensity of a fire, compliance with provisions for emergency vehicle access, use of approved building materials and design, and compliance with LAFD brush clearance

requirements pursuant to the Los Angeles Fire Code (2017). The undeveloped portions of the Santa Monica Mountains, the eastern slopes of the Santa Susana Mountains, and the southern slopes of the San Gabriel Mountains are generally designated for Open Space and development opportunities in these areas are limited. Development opportunities in hillside areas are further limited by single-family residential density regulations, slope density restrictions, and topography.

Under the Housing Element Update, the Rezoning Program will prioritize areas near transit, jobs, and in High and Very High Resource Areas; however, no rezones within environmentally sensitive areas such as the SRA and VHFHSZs are proposed. However, individual project development accommodated under the Housing Element Update may be located in any area where the zoning permits residential uses, including lower density residential sites in hillside areas and in or in the vicinity of VHFHSZs or SRAs. Therefore, build out of the RHNA would generally be directed away from more fire-prone neighborhoods, including hillside areas at risk of the spread of wildfire and subsequent downslope flooding and landslides, though it is possible that some development under the Housing Element Update would occur in these areas.

As discussed in Impact 4.17-1, generally new housing in VHFSHZ and SRA would not be likely to exacerbate wildfire risks. As documented by Keeley and Syphard in the International Journal of Wildland Fire (2018), in recent decades (since circa 1980), human-caused fires have been negatively correlated with population density, meaning more developed areas are less likely to be affected by wildfires throughout the State (Keeley and Syphard 2018) and suggesting that additional development would not necessarily lead to more wildfire risk.

Additionally, all development would be subject to applicable response plans and would be required to comply with the vegetation management, building materials, and emergency access requirements discussed under Impact 4.17-1. Fuel modification requirements dictate permanent vegetation management standards surrounding buildings, particularly in area in or near the SRA or a VHFHSZ. In the event of a wildfire, implementation of the County's ERP would coordinate all the facilities and personnel of County government, along with the jurisdictional resources of the cities and special districts within the County, into an efficient organization capable of managing emergency evacuation for affected areas. Furthermore, project development would be constructed according to the Los Angeles Fire Code requirements for fire-protection and would be subject to review and approval by the LAFD. The LAFD provides several fire development services to the City related to enforcing codes concerning new construction and remodeling, including Fire Life Safety Plan Checks and Fire Life Safety Inspections.

The California Building Standards Code and Los Angeles Municipal Code include minimum requirements for driveway widths, the creation and maintenance of wildfire buffers, sprinklers, and alarms.

To the extent any project development is located in VHFHSZs or SRAs as mapped by CAL FIRE and Fire Brush Clearance Zones, regulations require development to minimize fire risks during the high fire season through vegetation clearance, maintenance of landscape vegetation to minimize fuel supply that would spread the intensity of a fire, compliance with provisions for emergency vehicle access, use of approved building materials and design, and compliance with LAFD hazardous vegetation clearance requirements pursuant to the Los Angeles Fire Code (2017). Part 9 of the CFC mandates minimum building requirements designed to "safeguards the public health, safety and general welfare from the hazards of fire, explosion or dangerous conditions, …and provides safety and assistance to fire fighters and emergency responders." The requirements apply to the construction, alteration, movement, or movement of buildings, in addition to repairs, operation of equipment, use and occupancy of buildings, means of egress, evacuation plans, location, maintenance, removal, and demolition of every building or structure or any appurtenances (CFC 2019). PRC Section 4290 establishes minimum standards related to defensible space, including provisions for pertaining to road standards for fire equipment access; standards for signs identifying streets, roads, and buildings; minimum private water supply reserves for emergency fire use; and fuel breaks and greenbelts. Applicable sections of the PRC mandate standards for firebreaks (Section 4292) and operation of power equipment (Sections 4427, 4428, 4431) intended to minimize risks in areas subject to wildfire. In addition, Government Code Section 66474.02, also known as the Subdivision Map Act, prohibits the subdivision of parcels in a VHFHSZ, unless a city or county planning commission finds that the subdivision design and location are consistent with defensible space regulations in PRC Sections 4290 and 4291, public fire protection services would be available for structures located throughout the subdivision, and road designs meet standards for fire equipment ingress and egress per PCR Section 4290 and any local ordinance. Provisions in the Los Angeles Fire Code reinforce State safety regulation by defining standards for the design of fire access roads (Section 503), mandating fire safety procedures for the construction and demolition of structures (Section 3301-3317), regulating the types of activities permitted within a VHFHSZ (Section 4908), and requiring that property owners in a VHFHSZ clear brush and other native vegetation within a 200-foot radius of a building (Section 57.322).

The types of housing units that would be accommodated under the Housing Element Update would generally fall into five categories of development projects - multi-family residential development; single-family residential development; ADUs; mixed use development; and conversion and/or rehabilitation of existing nonresidential, residential and mixed-use structures to be used for housing. The predominant, but not only type in VHFSHZ or SRA areas, would be single-family homes. ADUs may also be a more common typology developed in or near an SRA or VHFHSZ, as they are allowed where there are single family homes. The City's ADU regulations require new construction of ADUs located both in a Hillside Area and a VHFHSZ to comply with additional requirements to address potential fire risk, including provision of an automatic fire sprinkler system, provision of one on-site parking space for the ADU, and an improved

roadway of at least 20 feet in front of the subject property (LAMC 12.22 A.33(c)(4)).

Unlike other impact sections, impacts related to wildfire would vary not necessarily by housing typology but by location, specifically whether the housing project is in or near a SRA or a VHFSHZ area and whether housing development would exacerbate existing wildfire risks resulting injury, death, loss of property, or exposure to pollutants, flooding, or landslides. As discussed in Impact 4.17-1, none of the case studies listed in Table 4-2 had significant unavoidable impacts related to wildfires.

The 8548 North Glenoaks Project, listed in Table 4-2, is an example of a housing development project not located in a SRA or VHFHSZ. In that case, it is a multi-family residential development consisting of 54 dwelling units. The IS-MND for this example project provided the following analysis and impact conclusion for Threshold 4.17-2 and represents the typical analysis for these impact criteria for any project not in a SRA or VHFHSZ area:

> *The proposed project is an infill development located within a highly urbanized area. According to the Environmental Assessment Form and slope analysis map dated October 19, 2019 provided by the applicant, 96 percent of the site has a slope of less than 10 percent, and two percent of the site has a slope over 15 percent. However, based on staff observations during a November 2019 site visit, the site appears to be generally flat, with minimal on-site slope. A review of the permit history for the subject property shows that a grading permit was applied for in December of 2016, and that verifications are currently in progress. The subject site is not identified on ZIMAS as being located within a Hillside Area, Very High Fire Hazard Severity Zone, or Fire District No. 1. While the site is located within a High Wind Velocity Area, the proposed Project is subject to Fire Department review and regulations. As such, slope, prevailing winds, or other factors will not exacerbate wildfire risks or contribute toward the uncontrolled spread of a wildfire. (8548, 8552, and 8554 North Glenoaks MND on page 82)*

For Threshold 4.17-4, the 8548 North Glenoaks Project IS-MND provided the following analysis and impact conclusion:

> *A significant impact would occur if the proposed project would be implemented on a site located in a hillside area with unstable geological conditions or soil types that would be susceptible to failure when saturated. The subject site is not located in a Hillside Area, and California Department of Conservation, Division of Mines and Geology, Seismic Hazard Zones Maps show that the subject site is not located with a landslide hazard zone. The project site and surrounding area are relatively flat. While the Hansen Heights and Burbank flood control channels are located approximately 20 feet to the north of the subject property, these channels are designed and engineered to contain storm water flows from developed properties in the surrounding and upstream areas. NavigateLA shows the subject site to be located in Flood Zone X, which corresponds to a less than 1 percent annual risk of flood.*

Further, and as previously identified in the response to Checklist Question No. X. Hydrology and Water Quality, ZIMAS records identify that the subject site Flood Zone is "Contained in storm drain (no need to refer to BOE)" and as such, no site-specific hydrology report will be required. Therefore, there would be no impact due to downslope or downstream flooding or landslides as a result of runoff, post-fire slope instability, or drainage changes from implementation of the proposed Project. (8548, 8552, and 8554 North Glenoaks MND at 83)

The 32 Small Lot Homes Project, discussed in Impact 4.17-1 above, was an example of single-family residential development in a VHFSHZ. The example project's IS-MND provided the following analysis and impact conclusion for Threshold 4.17-2:

The proposed Project would develop the site with 32 small lot residences. The Project site is located in a Very High Fire Hazard Severity Zone; however, Proposed Project would replace some of the existing area subject to brush fires with streets, new homes, and landscaped areas. In addition, the owners of each new home would be subject to the City's brush clearance requirements for hillside areas to reduce the potential for brush fires to occur, which would further decrease the surface area at the Project site that is subject to wildfires, relative to baseline conditions. As a consequence, the proposed Project would lessen the potential for uncontrolled brush fires at the Project site, relative to existing conditions. Therefore, impacts would be less than significant. (32 Small Lot Homes MND on page 84)

With regard to Threshold 4.17-4, the example project's IS-MND provided the following analysis and impact conclusion:

As discussed above, the Project improvements would reduce the area within the Project site subject to brushfires. In addition, the proposed Project would properly manage stormwater runoff through flood control channels, and would comply with Low Impact Development (LID) requirements in the City's Planning and Land Development Handbook for Low Impact Development, including onsite infiltration and landscaping, which would reduce potential for downstream flooding or landslides. The proposed Project would therefore decrease the risk of post-fire slope stability issues, relative to baseline conditions. As a consequence, impacts would be less than significant. (32 Small Lot Homes MND on p. 85.)

For the 32 Small Lot project, as discussed in Impact 4.17-1, LAFD recommended over 20 project conditions in its review of the project, including landscape buffers, as well as recommending the following additional mitigation measures be added to the MND:

i. Boxed-in eaves.
ii. Single pane, double thickness (minimum 1/8" thickness) or insulated windows.
iii. Non-wood siding.
iv. Exposed wooden members shall be two inches nominal thickness.

v. Noncombustible finishes.

Additionally, Impact Section 4.12-1 (Public Services – Fire), the Hidden Creek project, identified in Table 4-2, near Porter Ranch was analyzed by an EIR before Wildfire was added to Appendix G. That EIR found potential impacts relate to Public Services – Fire Facilities without mitigation measures. The EIR imposed measures for LAFD to review design plans and vegetation management plan to reduce the risk of the project exacerbating wildfire risks.

The Housing Element Update would generally direct development away from the hillside areas with fire hazards and new development would be required to comply with fire safety provisions established by the Los Angeles Fire Code (2017). Future development under the Housing Element Update, especially single-family and ADU development, could occur in hillside areas in or near the SRA or a VHFHSZs, portions of which are zoned for, and already contain, low-density, single-family development.

Based on all of the above, the City's extensive regulations and project review scheme would ensure that impacts related to build out of the RHNA in SRA or VHFSHZ areas exacerbating wildfire risks and resulting in risks to people and structures from pollutants, flooding and landslides would be avoided. However, based on unknown site-specific conditions or hazards or project characteristics impacts may occur. Therefore, impacts are ***potentially significant***.

Mitigation Measures

For any project in a VHFHSZ or SRA where the LAFD has determined existing regulations are not adequate based on unusual site-specific conditions, roadway conditions, or project characteristics, comply with Mitigation Measure 4.12-1a through Mitigation Measure 4.12-1d.

Significance After Mitigation

Along with existing regulations, implementation of Mitigation Measures 4.12-1a through 4.12-1d would reduce impacts related to exacerbating wildfire risks that could result in risks to structures or housing development occupants or others to exposure of pollutant concentrations and runoff, post-fire slope instability or drainage changes. However, it is not feasible to impose the measures on ministerial projects based on the City resources needed to apply and enforce the new regulations on all housing developments. Additionally, it is possible that for some discretionary housing projects during the Housing Element Update plan horizon, Mitigation Measures 4.12-1a through 4.12-1d may be found infeasible. Additionally, based on unusual site-specific conditions or project characteristics, impacts of a housing development project under build out of RHNA may still occur with imposition of mitigation measures. Therefore, impacts would be ***significant and unavoidable***.

Threshold 4.17-3	If located in or near state responsibility areas or lands classified as very high fire hazard severity zones, would housing development accommodated by the Housing Element Update require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment?

Impact 4.17-3 The Housing Element Update does not specifically call for the installation or maintenance of new infrastructure that would exacerbate fire risks in the SRA or a VHFHSZ. However, development in undeveloped hillside areas without existing infrastructure could require the installation of new infrastructure. In such cases, existing State and local fire safety measures, including defensible space for residential properties in the SRA or a VHFHSZ and a clearance zone of at least 25 feet when operating certain types of power tools in areas covered by forest, brush, or grass, would be generally be expected to avoid the potential for construction and maintenance activities to cause a wildfire. However, based on unusual site conditions or project characteristics, impacts could still occur. Mitigation Measure 4.17-3 would further reduce impacts by requiring the undergrounding of new power lines on discretionary projects. However, mitigation of all future projects is not feasible and based on site-specific attributes or unusual circumstances, build out of the RHNA in or near the SRA or VHFSHZ areas wildfire could result or be exacerbated. As a result, impacts would be ***significant and unavoidable.***

The Housing Element Update would prioritize the development of new housing in urbanized areas of the City. Under the Housing Element Update, the Rezoning Program will prioritize areas near transit, jobs, and in High and Very High Resource Areas; however, no rezones within environmentally sensitive areas such as the SRA and VHFHSZs are proposed. As such, the Proposed Project would not encourage development in the low-density residential areas subject to wildfire risk. Generally, development would occur in areas that are well-served by existing roadways and utilities infrastructure. Development in urbanized areas would not be anticipated to require additional roads, fuel breaks, emergency water sources, power lines or other utilities that would exacerbate fire risk. Nonetheless, development in portions of the SRA and VHFHSZs currently zoned for low-density, single-family residential use remains a possibility. If such development takes place on land not served by existing roads, fuel breaks, emergency water sources, power lines, or other utilities, the construction of new infrastructure could be required. As a result, infrastructure development and ongoing use of new infrastructure could introduce human-caused

ignition sources, such as the sparking of power utilities or the operation of construction equipment or other vehicles.

Although the installation and ongoing use of new infrastructure could be potential sources of wildfire ignition, risks would be reduced by existing State and local policies and safety measures. PRC Section 4290 requires adoption of minimum fire safety standards related to defensible space for residential, as well as commercial and industrial, properties in the SRA or, after July 1, 2021, a VHFHSZ. Relevant standards under this section include road standards for fire equipment access, as well as signs identifying streets, roads, and buildings. PRC Section 4292 mandates the maintenance of a specific circumference around poles and towers that support certain types of electrical utility apparatuses, while PRC section 4431 requires a clearance zone of at least 25 feet when operating certain types of power tools in an area covered by forest, brush, or grass. Government Code Section 66474.02 mandates that the design of new subdivisions adhere to defensible space regulations and ingress and egress road standards for fire equipment. LAFD Fire Life Safety review of plans for new development would likely require fire hydrants along new roadways built to serve development in the SRA or a VHFHSZ. Because the City currently does not require the undergrounding of power lines, a potential significant impact may occur in areas subject to wildfire risk, as discussed below.

The types of housing units that would be accommodated under the Housing Element Update would generally fall into five categories of development projects - multi-family residential development; single-family residential development; ADUs; mixed use development; and conversion and/or rehabilitation of existing nonresidential, residential and mixed-use structures to be used for housing. The predominant, but not only type in VHFSHZ or SRA areas, would be single-family homes. ADUs may be a more common typology developed in or near an SRA or VHFHSZ, as they are allowed where there are single family homes.

Unlike other impact sections, the likelihood that project would have a potential impact would vary more by location, specifically whether the housing project is in or near a SRA or a VHFSHZ area and whether housing development would trigger the need for new facilities (which could be more likely with larger projects). As discussed under Impact 4.17-1, none of the case studies listed in Table 4-2 had significant unavoidable impacts related to wildfires, none had mitigation measures for this impact criteria.

The 8548 N Glenoaks Boulevard Project was an example of a project not in a SRA or VHFHSZ. The project is a 54-unit multi-family residential apartment building development. The example project's IS-MND provided the following analysis and impact conclusion for this threshold which would be similar to other housing development projects of all typologies:

The General Plan Framework Element (originally adopted by the City Council in 1996 and readopted in 2001), sets forth a citywide comprehensive long-range growth strategy. Chapter 9 of the Framework Element, Infrastructure and Public Services, identifies the viability of the infrastructure system, including fire. As development occurs within the City, the Fire Department reviews applications for needed facilities. Where appropriate, construction of new facilities is required as a condition of development. A significant impact would occur if the Los Angeles Fire Department (LAFD) could not adequately serve the proposed Project, necessitating a new or physically altered station. The project site and the surrounding area is currently served by Fire Station 77 located at 9224 Sunland Boulevard, 0.7 miles north of the subject property. The proposed project would result in a net increase of 54 residential dwelling units, which could increase the number of emergency calls and demand for LAFD fire and emergency services. To maintain the level of fire protection and emergency services, the LAFD may require additional fire personnel and equipment. However, given that there is an existing fire station in close proximity to the project site, it is not anticipated that there would be a need to build a new or expand an existing fire station to serve the proposed project and maintain acceptable service ratios, response times, or other performance objectives for fire protection. By analyzing data from previous years and continuously monitoring current data regarding response times, types of incidents, and call frequencies, LAFD can shift resources to meet local demands for fire protection and emergency services. The proposed project would neither create capacity or service level problems nor result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities in order to maintain acceptable service ratios, response times or other performance objectives for fire protection. Therefore, the proposed project would result in a less-than-significant impact to fire risk. (8548 North Glenoaks MND on pages 82 and 83)

For projects in an SRA or VHFSHZ, the impacts are unlikely. As discussed in Impact 4.17-1, in the study by Keeley and Syphard in the International Journal of Wildland Fire (2018), in recent decades (since circa 1980), human-caused fires have been negatively correlated with population density, meaning more developed areas are less likely to be affected by wildfires throughout the State (Keeley and Syphard 2018). Fuel modification requirements dictate permanent vegetation management standards surrounding buildings, particularly in area in or near the SRA or a VHFHSZ. The California Building Standards Code and Los Angeles Municipal Code include minimum requirements for driveway widths, the creation and maintenance of wildfire buffers, sprinklers, and alarms. New development on previously undeveloped sites could require the installation and maintenance of new or improved roads, emergency water sources, power lines or other utilities, the construction and operation of which would introduce potential sources of wildfire ignition, such as the sparking of an overhead power line or construction equipment or the operation of resident vehicles. Existing State and local fire safety measures would substantially reduce the risk of wildfire. Nonetheless, although ignition sources have declined markedly in recent decades, one notable exception is powerline ignitions (Keeley and Syphard 2018). Potential wildfire impacts associated with related infrastructure (particularly aboveground power lines) may exacerbate fire risk or may result

in temporary or ongoing impacts to the environment. Most development under the Housing Element Update would occur as infill development in previously developed area of the City situated neither in nor near SRAs or VHFHSZs and would not involve the risk of wildfires due to the installation of new associated infrastructure. However, certain areas of the SRA and VHFHSZs within the City are currently zoned for low-density, single-family residential uses, and single-family and ADU development could be accommodated in these areas under the Housing Element Update. Such new development in the SRA or VHFHSZs could require the construction and maintenance of new infrastructure, including aboveground power lines, which have been linked to exacerbation of wildfires. Although impacts are unlikely based upon existing regulations, impacts may occur based upon unusual site-specific conditions or aspects of the infrastructure project. Impacts are determined to be ***potentially significant.***

Mitigation Measure

4.17-3 Undergrounding of Power Lines in and Near an SRA and VHFHSZs

For all discretionary applications for development located in or within one mile of an SRA or VHFHSZs, that involve or require the installation of new power lines shall be required to install the new power line underground. Prior to the issuance of a grading or building permit, the applicant shall submit plans for undergrounding of power lines.

Significance After Mitigation

Implementation of Mitigation Measure 4.17-3, would reduce the potential for impacts under this threshold by restricting power lines to underground in areas subject to wildfire risk. It is not feasible to impose the mitigation measure on all ministerial projects due to the required resources to implement. It is also possible that future discretionary projects may determine the measure is infeasible. Additionally, even with existing regulations and the mitigation measure based on unusual site-specific conditions or aspects of the infrastructure project, including power line project and others, may result in wildfire impacts from the installation or maintenance of infrastructure required by build out of the RHNA. Impacts therefore, remain ***significant and unavoidable***.

Threshold 4.17-5	Would housing development accommodated by the Housing Element Update expose people or structures, either directly or indirectly, to a significant risk of loss, injury, or death involving wildland fires?

Impact 4.17-5 The Housing Element Update would generally direct development away from the areas susceptible to wildfire risks, and new development located within the SRA or a VHFHSZ would be required to comply with fire safety provisions established by State regulations and the Los Angeles Fire Code. State and local regulations would reduce the risk of wildfires such that development would be substantially unlikely to expose people and structures to a significant risk of loss, injury, or death. In addition, implementation of Mitigation Measures 4.12-1(a) through 4.12-1(d), 4.15-1 and 4.15-3 where found necessary based on unusual site conditions or project characteristics should further reduce impacts to less than significant. However, it remains possible that even with existing regulations or imposition of mitigation measures. Impacts therefore would be ***significant and unavoidable.***

Portions of the City are subject to wildland fire risk, primarily in areas where single-family residential development abuts the undeveloped hillsides and natural areas in the northern portion of the City and around the Santa Monica Mountains (City of Los Angeles 1996). Build out of the RHNA would generally be located on urban infill sites. These areas tend to be concentrated in the more densely urbanized portions of the City, and not near the SRA or VHFHSZs. Under the Housing Element Update, the Rezoning Program will prioritize areas near transit, jobs, and in High and Very High Resource Areas; however, no rezones within environmentally sensitive areas such as the SRA and VHFHSZs are proposed. Therefore, the Proposed Project would generally direct future housing development away from neighborhoods, such as those near the urban-wildland interface, where the risk of wildland fires is heightened. However, individual project development accommodated under the Housing Element Update may be located in any area where the zoning permits residential uses. Because many hillside areas in or adjacent to VHFHSZs or SRAs are zoned for low-density residential use, it remains possible that single-family and ADU development under the Housing Element Update may occur in the SRA or a VHFHSZ.

To the extent any project development is located in or near VHFHSZs or SRAs as mapped by CAL FIRE and Fire Brush Clearance Zones, regulations require development to minimize fire risks during the high fire season through vegetation clearance, maintenance of landscape vegetation to minimize fuel supply that would spread the intensity of a fire, compliance with provisions for emergency vehicle access, use of approved building materials and design, and compliance with LAFD hazardous vegetation clearance requirements pursuant to the Los Angeles Fire Code. Part 9 of the CFC mandates minimum building

requirements designed to "safeguards the public health, safety and general welfare from the hazards of fire, explosion or dangerous conditions, …and provides safety and assistance to fire fighters and emergency responders." The requirements apply to the construction, alteration, movement, or movement of buildings, in addition to repairs, operation of equipment, use and occupancy of buildings, means of egress, evacuation plans, location, maintenance, removal, and demolition of every building or structure or any appurtenances (CFC 2019). PRC Section 4290 establishes minimum standards related to defensible space, including provisions for pertaining to road standards for fire equipment access; standards for signs identifying streets, roads, and buildings; minimum private water supply reserves for emergency fire use; and fuel breaks and greenbelts. Applicable sections of the PRC mandate standards for firebreaks (Section 4292) and operation of power equipment (Sections 4427, 4428, 4431) intended to minimize risks in areas subject to wildfire. In addition, Government Code Section 66474.02, also known as the Subdivision Map Act, prohibits the subdivision of parcels in a VHFHSZ, unless a city or county planning commission finds that the subdivision design and location are consistent with defensible space regulations in PRC Sections 4290 and 4291, public fire protection services would be available for structures located throughout the subdivision, and road designs meet standards for fire equipment ingress and egress per PCR Section 4290 and any local ordinance. Provisions in the Los Angeles Fire Code reinforce State safety regulation by defining standards for the design of fire access roads (Section 503), mandating fire safety procedures for the construction and demolition of structures (Section 3301-3317), regulating the types of activities permitted within a VHFHSZ (Section 4908), and requiring that property owners in a VHFHSZ clear brush and other native vegetation within a 200-foot radius of a building (Section 57.322).

Any new housing developed in hillside areas would be subject to the above-described requirements. In addition, project development would be required to be constructed according to the UBC requirements for fire-protection and would be subject to review and approval the LAFD Fire Life Safety Plan Check review process.

The types of housing units accommodated under the Housing Element Update would generally fall into five categories of development projects - multi-family residential development; single-family residential development; ADUs) mixed use development; and conversion and/or rehabilitation of existing nonresidential, residential, and mixed-use structures to be used for housing. The predominant housing type but not only type in SRA or VHFSHZ areas would be single-family homes. ADUs would also be a more common typology developed in or near an SRA or VHFHSZ, as they are allowed with single family homes. The City's ADU regulations require new construction of ADUs located both in a Hillside Area and a VHFHSZ to comply with additional requirements to address potential fire risk, including provision of an automatic fire sprinkler system, provision of one on-site parking space for the ADU, and an improved roadway of at least 20 feet in front of the subject property (LAMC 12.22 A.33(c)(4)). Multi-family

developments would also be located in or near VHFHSZ or SRA areas; however, it is not anticipated that large developments would occur in these areas under the Housing Element Update due to the City's zoning.

Unlike other impact sections, the likelihood that project would have a potential impact would vary more by location, specifically whether the housing project is in or near a SRA or a VHFSHZ area and whether housing development would trigger the need for new facilities (which could be more likely with larger projects). As discussed under Impact 4.17-1, none of the case studies listed in Table 4-2 had significant unavoidable impacts related to wildfires and one project included a mitigation measure for this impact criteria. The 8548 N Glenoaks Boulevard Project is an example of a project not in a SRA or VHFHSZ. The project is a 54-unit multi-family residential apartment building development. The example project's IS-MND provided the following analysis and impact conclusion for this threshold which would be similar to other housing development projects of all typologies:

> *A significant impact would occur if the proposed project exposed people and structures to high risk of wildfire. The project site is located in a highly urbanized area of the City and the area surrounding the project site is completely developed. Accordingly, the project site and the surrounding area are not subject to wildland fires. Therefore, the proposed project would not expose people or structures to a risk of loss, injury, or death involving wildland fires, and no impact would occur. (8548, 8552, and 8554 North Glenoaks MND on page 48)*

Most development accommodated under the Housing Element Update would occur as infill development in previously developed areas of the City situated neither in nor near the SRA or VHFHSZs and would likely not expose people or structures, either directly or indirectly, to a significant risk of loss, injury, or death involving wildland fires due to the implementation of existing State and local regulations. However, certain areas of the SRA and VHFHSZs within the City are zoned for low-density, single-family residential uses and could accommodate single-family and ADU development under the Housing Element. In addition, based on this being a plan-level analysis and the potential for unusual site-specific conditions, hazards or project characteristics, build out of the RHNA may result in impacts. Therefore, impacts are ***potentially significant***.

Mitigation Measures

For any project in a VHFHSZ or SRA where the LAFD has determined existing regulations are not adequate based on unusual site-specific conditions, roadway conditions, or project characteristics, comply with Mitigation Measures 4.17-1 and 4.12-1(a) through Mitigation Measure 4.12-1(d). For all discretionary applications for development located in or within one mile of an SRA, implementation of Mitigation Measure 4.17-3 is required.

Significance After Mitigation

Along with existing regulations, implementation of Mitigation Measures 4.17-1 and 4.17-3 would reduce the risk of construction-related activities and the potential for impacts associated with power lines in areas subject to wildfire risk. In addition, implement of Mitigation Measures 4.12-1(a) through 4.12-1(d) require plan reviews by LAFD, emergency access plans, and hillside fire/vegetation management plans, which would reduce demands on LAFD for fire protection services (see Section 4.12, *Public Services – Fire Protection*). However, it is not feasible to impose the measures on ministerial projects based on the City resources needed to apply and enforce the new regulations on all housing developments. Additionally, it is possible that for some discretionary housing projects during the Housing Element Update plan horizon, implementation of Mitigation Measures 4.12-1(a) through 4.12-1(d), 4.17-1 and 4.17-3 may be found infeasible. Additionally, based on unusual site-specific conditions or project characteristics, impacts of a housing development project under build out of RHNA may still occur with imposition of mitigation measures. Therefore, impacts would be ***significant and unavoidable***.

Cumulative Impacts

The geographic area to analyze cumulatively considerable wildfire impacts includes the City and immediately adjacent areas that could be affected by wildfires. Cumulative development citywide could exacerbate wildfire risk and lead to direct and indirect less than significant impacts, as discussed above. Specifically, wildfires would tend to occur in the less dense portions of the City, in or near the SRA or VHFHSZs. Housing development accommodated under the Housing Element Update could occur on properties in or near the SRA or VHFHSZs, insofar as those areas are currently zoned to permit residential development and housing development may occur in any area where residential uses are permitted. Projects contributing to the cumulative wildfire include housing projects that are already approved but not occupied and non-residential development through 2029. The potential for impacts from individual developments is site-specific and depends on the location and nature of each individual development proposal. All future development projects, including housing development accommodated under the Proposed Project, would continue to be subject to existing State and local requirements as described in the *Environmental Setting*, above, and discretionary projects may be subject to project-specific mitigation requirements under CEQA. The Housing Element Update would prioritize housing in urbanized areas outside the SRA and VHFHSZs, and any rezoning that is expected to occur as a result of the Rezoning Program would be located outside of environmentally sensitive areas such as the SRA and VHFHSZs; however, potential cumulative wildfire impacts may occur due to unusual site-specific conditions or project characteristics.

Impair an Adopted Emergency Response Plan or Emergency Evacuation Plan

Cumulative development in such areas would have the potential to cause the impairment of an adopted emergency response plan or emergency evacuation plan due to the temporary obstruction of roads associated with construction activities on or near a designated emergency route. Implementation of Mitigation Measure 4.17-1, would reduce the potential for obstruction of roadways under the Housing Element Update by regulating construction-related staging and parking for projects in hillside areas. However, due to unknown site-specific conditions or hazards or project characteristics, the incremental effect of the Housing Element Update with respect to impairment of an adopted emergency response plan or emergency evacuation plan would be cumulatively considerable and cumulative impacts would be ***significant and unavoidable***.

Exacerbate Fire Risks or Expose People or Structures to Significant Risks

In the event that development under the Housing Element Update occurs in or near the SRA or a VHFHSZ, the risk of wildfire ignition due to construction or occupation of the development would be minimized by existing State and local fire safety regulations. Additionally, the potential to expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes would be reduced by applicable State and local fire safety regulations. However, due to unknown site-specific conditions or hazards or project characteristics, the Housing Element Update would result in significant impacts related to the exposure of project occupants to pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire, or where wildfires could expose people and structures to increased risks due to flooding or landslides. Opportunities for development unrelated to the Housing Element Update to occur in or near the SRA or VHFHSZ would be limited by such factors as zoning and topography. Nonetheless, due to unknown site-specific conditions or hazards or project characteristics, the incremental effect of the Housing Element Update related to wildfire risks would be cumulatively considerable and cumulative impacts would be ***significant and unavoidable***.

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5 OTHER CEQA CONSIDERATIONS

Section 15126 of the CEQA Guidelines requires that EIRs identify significant environmental effects of a project, significant environmental effects of a project that cannot be avoided (identified in Section 4), significant irreversible environmental changes that would result from implementation of a project, growth-inducing impacts of a project, and any secondary impacts from the proposed mitigation measures associated with a project. Table ES-3 in Section 2, *Executive Summary*, and Sections 4.1 through 4.17, of this EIR, provide a comprehensive identification of the environmental effects of the Proposed Project, including the level of significance both before and after mitigation.

5.1. SIGNIFICANT IRREVERSIBLE ENVIRONMENTAL EFFECTS

Section 15126.2(c) of the CEQA Guidelines requires a discussion of any significant irreversible environmental changes that would be caused by the Proposed Project. Specifically, Section 15126.2(c) states:

> Uses of nonrenewable resources during the initial and continued phases of the project may be irreversible since a large commitment of such resources makes removal or nonuse thereafter unlikely. Primary impacts and, particularly, secondary impacts (such as highway improvement which provides access to a previously inaccessible area) generally commit future generations to similar uses. Also, irreversible damage can result from environmental accidents associated with the project. Irreversible commitments of resources should be evaluated to assure that such current consumption is justified.

Generally, a project would result in significant irreversible environmental changes if any of the following would occur:

- The primary and secondary impacts would generally commit future generations to similar uses;
- The project would involve a large commitment of nonrenewable resources;
- The project involves uses in which irreversible damage could result from any potential environmental accidents associated with the project; or
- The project involves the wasteful use of resources.

Resources that would be consumed as a result of construction and operation of housing development accommodated under the Housing Element Update include water, electricity, natural gas, and fossil fuels. However, as discussed in Section 6, *Energy*, of the Initial Study (Appendix A) and Section 4.16, *Utilities and Service Systems*, of this EIR, the amount and rate of consumption of these resources would not result in significant environmental impacts related to the unnecessary, inefficient, or wasteful use of resources.

Construction activities related to the housing development accommodated under the Housing Element Update would result in the irretrievable commitment of nonrenewable energy resources, primarily in the form of fossil fuels (including fuel oil), natural gas, and gasoline for automobile and construction equipment. However, as discussed in Section 6, *Energy*, of the Initial Study (Appendix A), use of such resources by construction activities associated with residential development under the Housing Element Update would not be unusual as compared to other construction projects and would not substantially affect the availability of such resources.

With respect to operational activities, compliance with all applicable energy and building codes, as well as mitigation measures, would ensure that natural resources are conserved or recycled to the maximum extent feasible. Housing development accommodated under the Housing Element Update would be subject to the energy conservation requirements of the California Energy Code (Title 24, Part 6 of the California Code of Regulations, California's Energy Efficiency Standards for Residential and Nonresidential Buildings), the California Green Building Standards Code (Title 24, Part 11 of the California Code of Regulations), and the Los Angeles Green Building Code (LAMC Chapter IX, Article 9). The California Energy Code provides energy conservation standards for all new and renovated commercial and residential buildings constructed in California. This Code applies to the building envelope, space-conditioning systems, and water-heating and lighting systems of buildings and appliances and provides guidance on construction techniques to maximize energy conservation. Minimum efficiency standards are given for a variety of building elements, including appliances; water and space heating and cooling equipment; and insulation for doors, pipes, walls, and ceilings. The Code emphasizes saving energy at peak periods and seasons and improving the quality of installation of energy efficiency measures. The California Green Building Standards Code sets targets for energy efficiency; water consumption; dual plumbing systems for potable and recyclable water; diversion of construction waste from landfills; and use of environmentally sensitive materials in construction and design, including ecofriendly flooring, carpeting, paint, coatings, thermal insulation, and acoustical wall and ceiling panels. New developments would also be required to comply with the Los Angeles Green Building Code, which contains mandatory measures for residential and non-residential uses, particularly those related to energy efficiency (i.e., renewable energy, indoor and outdoor water use, and water reuse systems). While consumption of natural resources in the City would increase with implementation of the Housing Element Update due to development and associated population increases, it is also likely that in response to GHG reduction mandates, new technologies or systems will emerge, or will become more cost-effective or user-friendly, that will further reduce the City's reliance upon nonrenewable natural resources. Therefore, implementation of the Housing Element Update would not involve a wasteful or inefficient manner use of natural resources.

5.2. GROWTH INDUCING IMPACTS

Section 15126.2(d) of the CEQA Guidelines requires consideration of growth inducing impacts of a proposed project to be considered. Growth inducing impacts are characteristics of a project that could "foster economic or population growth, or the construction of additional housing, either directly or indirectly, in the surrounding environment." According to the CEQA Guidelines, such projects include those that would remove obstacles to population growth (e.g., a major expansion of a wastewater treatment plant). In addition, as set forth in the CEQA Guidelines, increases in the population may tax existing community service facilities, requiring construction of new facilities that could cause significant environmental effects. The CEQA Guidelines also state that it must not be assumed that growth in an area is necessarily beneficial, detrimental, or of little significance to the environment. Generally, a project may result in growth inducing effects if it involves one of the following:

- The removal of a regulatory obstacle to growth (e.g., an annexation or up-zoning), thus indirectly inducing population and/or employment growth; and/or
- Extension of infrastructure (sewer, water, etc.) to an area currently undeveloped and/or lacking adequate infrastructure, thus removing an obstacle to growth.

The Housing Element Update would accommodate up to 456,643 residential units to meet the City's RHNA Allocation,[1] which is determined by SCAG to quantify the need for housing within each jurisdiction based on forecasted growth and unmet need for housing among the existing population (existing need). As discussed in Section 3.8 of Section 3, *Project Description*, the Proposed Project is the build out of 420,327 housing units in the next eight years (which is the full RHNA build out of 456,643 minus the 36,316 housing units that were already approved but had not received certificate of occupancies at the time the environmental review was started). This EIR analyzed the build out of 420,327 units by 2029 with population projections from the 2020-2045 RTP/SCS interpolated to 2029. Although the proposed plan is the build out of 420,327 units, the City is only exercising discretion in relation to its policies and programs, including the Rezoning Program, to accommodate approximately 220,000 of those units. The reason for that is the Inventory of Adequate Sites for housing included in the Housing Element Update identifies existing development potential for 266,647 housing units in the City with existing zoning. This leaves a shortfall of approximately 190,000 units requiring a Rezoning Program. However, HCD recommends buffers in the Rezoning Program for those properties that may get redeveloped with non-RHNA

[1] As discussed in Section 3, *Project Description*, the City's RHNA Allocation is 456,643 units. This EIR analyzes the build out of 420,327 housing units, which is the RHNA Allocation minus the existing, approved pipeline development projects which are anticipated to be completed during the plan period and therefore count towards completion of the overall RHNA Allocation.

development. The proposed Rezoning Program[2] described in Section 3, *Project Description*, is to rezone up to approximately 220,000 units. Implementation of the Rezoning Program needs to be completed by October 2024 and would include updates to the City's Community Plans, an update to the growth strategy as set in the City's Framework Element, and/or expansion of affordable housing incentive programs (e.g., extending the applicability of the City's TOC Program to areas that are in a High Resource or Very High Resource Area, or near jobs centers), and/or targeted Municipal Code amendments. These programs may also consider rezoning or development incentives in existing lower density residential zones to create opportunities for missing middle housing typologies (up to low-medium residential density) in these areas.

As discussed in Section 4.12, *Public Services*, the Housing Element Update is not anticipated to be a growth inducing plan. The Housing Element Update is a growth accommodating plan. While the City is committing to take discretionary action to rezone to accommodate up to 220,000 housing units that do not already exist, it is not foreseeable that all 220,000 units would get built with housing. As discussed above and in Section 3, *Project Description*, HCD recommends a buffer because it is not likely that all sites rezoned under a Rezoning Program are developed with housing. Additionally, it is not the City's experience that all lots allowing housing get redeveloped with housing uses as other non-residential uses are allowed and some lots never redevelop.

Additionally, the Proposed Project does not include any infrastructure projects as part of the project. As discussed in Section 4.16, *Utilities*, smaller infrastructure projects would foreseeably be undertaken to accommodate build out of the RHNA, such as replacement of sewer or water mains. Such infrastructure would serve the proposed plan and would not foreseeably induce growth. Based on this, the proposed plan is not anticipated to be growth inducing.

There is no basis that if all of the RHNA gets developed it would induce growth of additional residential uses or non-residential uses. It is possible, although speculative, that if all the RHNA gets built out it could stimulate non-residential uses, such as uses that serve housing or uses that provide jobs to the new residents. Impacts from that could result in additional construction impacts that would be similar to those identified for housing development in this EIR. Impacts from inducing additional non-residential development could increase demand on utilities and infrastructure. Additional demands on water supply could exceed the supply identified City's Urban Water Management Plan. This could require the City in its next update in five years to the UWMP to identify additional sources of water, impose additional water saving or efficiency mechanisms, or potentially even require the City to impose limitations on additional development or types of uses. Additional demands on utilities could require additional construction of

[2] The Rezoning Program, which would need to be completed by 2024, will likely be accomplished through updates to the City's Community Plans (Land Use Element), an update to the City's Density Bonus program, targeted zone changes, updates to specific plans and overlays, or other zoning ordinances.

facilities to treat wastewater or treat surface water, or additional construction of conveyance facilities, such as pump stations or upgraded sewer or water trunk lines, mains, and laterals. Additional demands on City services could require the construction of police, fire, library, and park facilities, and schools. Construction of utility infrastructure and public service facilities would result in construction impacts similar to those identified in this EIR from housing development, such as construction noise impacts; air quality impacts from criteria pollutant exceedance or the publics exposure to toxic air contaminants; impacts to cultural resources from destruction of historic or archaeological resources; destruction related impacts to paleontological or tribal cultural resources; and exposure of the public, including school children, to hazardous materials or toxins. Impacts to biology or wildfire may occur depending if construction occurs in areas previously undeveloped or in the hillsides that contain native vegetation, or in a VHFHSZ. Impacts related to increased hazards related to hydrology or geology would not be likely from construction of new utility lines. Increased development to serve housing, or provide jobs for those living in housing, would not foreseeably result in impacts to VMT as such development would put more jobs and services near housing and result in a more dense City. Additionally, while additional jobs, services, and housing may create more activities that would increase air pollution and GHG emissions overall in the City, such emissions would likely be moved from other places and reduce overall emissions per capita and thereby meet State and SCAQMD goals.

There is nothing in the Safety Element Update that is anticipated to be growth inducing as it is just updating policies and programs and information related to wildfires, floods, and climate adaptability to comply with State law.

Based on all of the above, the Proposed Project is not growth inducing.

5.3. POTENTIAL SECONDARY EFFECTS

CEQA Guidelines Section 15126.4(a)(1)(D) states that, "[i]f a mitigation measure would cause one or more significant effects in addition to those that would be caused by the project as proposed, the effects of the mitigation measures shall be discussed but in less detail than the significant effects of the project as proposed." In accordance with the *CEQA Guidelines*, the following provides a discussion of the potential impacts that could occur from implementation of the proposed mitigation measures.

Air Quality

Mitigation Measure 4.2-2(a) would reduce regional and local emissions generated by various construction activities, including equipment operation and truck trips, through best management practices. Implementation of this measure would have a beneficial impact on reducing air quality impacts and would not result in adverse secondary impacts. **Mitigation Measure 4.2-2(b)** would reduce regional and local

emissions generated during project operation, including emissions from natural gas and electricity usage, through design features. **Mitigation Measure 4.2-3** would require construction health risk assessments be performed for discretionary projects with sufficient duration and proximity to expose nearby sensitive receptors to substantial pollutant concentrations. These mitigation measures are procedural actions that would not result in physical changes in the environment that could result in secondary impacts.

Biological Resources

Mitigation Measures 4.3-1(a) and **4.3-1(b)** require development projects on certain sites to conduct biological resources assessment reports and pre-construction bird nest surveys to ensure that sensitive species and/or habitats are not adversely affected. If indicated as appropriate by the biological resources assessment report required in **Mitigation Measure 4.3-1(a)**, **Mitigation Measure 4.3-1(c)** would require focused surveys for special status plants. If surveys indicate presence of special status species or habitat, **Mitigation Measure 4.3-1(d)** would require the implementation of an Adaptive Management Plan for future operations to ensure that project operations do not result in impacts to special status species. **Mitigation Measures 4.3-2(a)** and **4.3-2(b)** require development projects on certain sites to conduct a Habitat Mitigation and Monitoring Program (HMMP) and/or conduct a tree report and tree replanting plan to ensure that riparian habitats and/or other sensitive natural communities are not adversely affected. These mitigation measures are procedural actions that would not result in physical changes in the environment that could result in secondary impacts.

Cultural Resources

Mitigation Measures 4.4-1(a) through **4.4-1(j)** require a process for the identification of known and potential historical resources and measures to ensure compliance with the Secretary of the Interior's Standards for rehabilitation, new construction, or relocation (i.e., **Mitigation Measures 4.4-1(b), 4.4-1(c),** and **4.4-1(d)**). If compliance with the Standards is not feasible, documentation of the resource pursuant to Historic American Building Survey (HABS) standards (i.e., **Mitigation Measure 4.4-1(e)**), the installation of interpretive displays (i.e., **Mitigation Measure 4.4-1(f)**), and/or construction monitoring and salvage of historical building materials (i.e., **Mitigation Measure 4.4-1(g)**) would occur. In addition, mitigation measures for the protection of historical resources located in close proximity to construction sites include the temporary relocation of historical resources, excavation and shoring planning, and structural construction monitoring (i.e., **Mitigation Measures 4.4-1(h), 4.4-1(i),** and **4.4-1(j)**). **Mitigation Measure 4.4-2**, in addition to **Mitigation Measures 4.15-1(a)** and **4.15-1(b)** in Section 4.15, *Tribal Cultural Resources*, would provide for recovery of any significant resources that cannot be preserved in place. These mitigation measures are procedural actions that would not result in physical changes in the environment that could result in secondary impacts. To the extend the mitigation measure requires relocation, that could result in

some change to the physical environmental but generally such impacts would be less than significant or temporary.

Geology and Soils

Mitigation Measures 4.5-1(a), 4.5-1(b), and **4.5-1(c)** would ensure that potential paleontological resources are identified and either further avoided, or recovered and curated. These mitigation measures are procedural actions that would not result in physical changes in the environment that could result in secondary impacts.

Hazards and Hazardous Materials

Mitigation Measures 4.7-2(a) and **4.7-2(b)** would require implementation of a necessary remediation of soil and/or groundwater contamination prior to excavation or grading on properties within 0.25 mile of schools and/or on properties listed as hazardous material sites. These mitigation measures are procedural actions that would not result in physical changes in the environment that could result in secondary impacts. Any impacts from abatement of hazardous materials would be less than significant with compliance with applicable regulations for the handling, transport, and disposal of hazardous materials.

Hydrology and Water Quality

Mitigation Measure 4.8-1 would require development and implementation of a project-specific Stormwater Pollution Prevention Plan (SWPPP) for compliance with the Clean Water Act's National Pollutant Discharge Elimination System (NPDES) program, which is required by existing regulations and would reduce impacts from housing development projects related to impeding or redirecting flood flows to a less than significant level. This mitigation measure is a procedural action that would not result in physical changes in the environment that could result in secondary impacts.

Noise

Mitigation Measures 4.10-1(a) through **4.10-1(f)** would reduce construction noise to the extent feasible, by use of noise shielding, screening, and barriers. **Mitigation Measure 4.10-2** would involve preparation and implementation of recommendations includes in a project-specific operational nose study for projects with roof decks and/or pool decks. **Mitigation Measures 4.10-3(a)** and **4.10-3(b)** are specific construction-related measures to substantially reduce vibration levels. These measures would not result in additional secondary impacts. The potential use of some measures, such as sound barriers and building designs, could affect the visual environment. However, the potential visual effects from this mitigation measure are expected to be similar to the effects that have been evaluated in the Aesthetics section of this EIR. No adverse secondary impacts would result from these measures.

Public Services

Mitigation Measures 4.12-1(a), 4.12-1(b), 4.12-1(c), and **4.12-1(d)** involve specific measures related to emergency response time and fire protection services. **Mitigation Measures 4.12-2(a)** and **4.12-2(b)** involve specific measures related to reducing demands on LAPD for police protection services. The potential use of some measures, such as security lighting and secure walls/fencing, could affect the visual environment. However, the potential visual effects from these mitigation measures are expected to be similar to the effects that have been evaluated in the Aesthetics section of this EIR. No adverse secondary impacts would result from these measures.

Transportation

Mitigation Measures 4.10-1 would include preparation and implementation of a detailed Construction Management Plan (CMP), including street closure information, detour plans, haul routes, and staging plans. **Mitigation Measure 4.10-2** requires a Transportation Demand Management (TDM) program to reduce VMT impacts below the City's project threshold to the extent feasible. These mitigation measures are procedural actions that would not result in physical changes in the environment that could result in secondary impacts.

Tribal Cultural Resources

Mitigation Measures 4.15-1(a) and **4.15-1(b)**, in addition to **Mitigation Measure 4.4-2**, would ensure that tribal resources are identified and either further avoided or recovered. These mitigation measures are procedural actions that would not result in physical changes in the environment that could result in secondary impacts.

Wildfire

Mitigation Measure 4.17-1 would include measures to reduce the risk of construction-related activities impairing an emergency response plan or emergency evacuation plan. **Mitigation Measure 4.17-3** would require all new power lines be installed underground. The potential use of some measures, such as the installation of underground power lines, could affect the physical environment. Any potential installation would be required to comply with regulations and regulatory agency oversight, which may require subsequent environmental review. Any impacts from installation would be speculative at this time.

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6 ALTERNATIVES

6.1 INTRODUCTION

As required by Section 15126.6 of the CEQA Guidelines, the EIR must examine a range of reasonable alternatives to the Proposed Project that would attain most of the basic project objectives, but would avoid or substantially lessen any of its significant environmental effects. The purpose of analyzing alternatives for a project is to identify and disclose ways to mitigate or avoid the significant effects that a project may have on the environment (Public Resources Code Section 21002.1). Per Section 15126.6(b) of the CEQA Guidelines:

> "… the discussion of alternatives shall focus on alternatives to the project or its location which are capable of avoiding or substantially lessening any significant effects of the project, even if these alternatives would impede to some degree the attainment of the project objectives, or would be more costly".

While an EIR need not consider every conceivable alternative to a project, it must consider a reasonable range of potentially feasible alternatives that will foster informed decision making and public participation. The focus is on alternatives that would avoid or substantially lessen any of the significant effects of the project. Of those alternatives, the EIR need examine in detail only the ones that the lead agency determines could feasibly attain most of the basic objectives of the project (CEQA Guidelines Section 15126.6(f)).

6.2 PROJECT OBJECTIVES

CEQA requires an EIR to include a statement of the objectives sought by a project proponent, in this case the City of Los Angeles. The statement of objectives should include the underlying purpose of the project. As stated in Section 3, *Project Description*, the underlying purpose and objectives of the Proposed Project include the following:

- **Underlying Purpose:** Accommodate the Regional Housing Needs Assessment compliant with State law and consistent with the City's General Plan
- **Objective 1:** Meet the City's fair share of the regional housing need to accommodate projected population growth and meet existing housing needs within the city
- **Objective 2:** Increase the availability of affordable housing and the variety of housing options within the city

- **Objective 3:** Promote concentrated housing growth in High and Very High Resource areas and in areas with good access to jobs, services, and high-quality public transit
- **Objective 4:** Strengthen the City's goals, policies, objectives, and programs that prevent displacement, promote homeless prevention and diversion, and promote housing stability
- **Objective 5:** Strengthen the City's goals, policies, objectives, and programs that reduce greenhouse gas emissions and promote climate resiliency
- **Objective 6**: Update the City's Safety and Health Elements to be consistent with current State regulations

6.3 SELECTION OF ALTERNATIVES FOR ANALYSIS

EIR alternatives analyses focus on alternatives that reduce or avoid the unavoidably significant environmental impacts of the proposed project. Implementation of the Housing Element Update would result in the following significant and unavoidable impacts:

- **Air Quality** – Threshold 4.2-2 (Construction and Operational Criteria Air Pollutant Emissions: Project and Cumulative)
- **Biological Resources** – Threshold 4.3-1 (Special-Status Species: Project and Cumulative); Threshold 4.3-2 (Sensitive Habitats: Project and Cumulative); Threshold 4.3-3 (Wildlife Corridors: Project and Cumulative)
- **Cultural Resources** – Threshold 4.4-1 (Historic Resources: Project and Cumulative); Threshold 4.4-2 (Archaeological Resources: Project and Cumulative)
- **Geology and Soils** – Threshold 4.5-1 (Paleontological Resources: Project and Cumulative)
- **Hazards and Hazardous Materials** – Threshold 4.7-2 (Hazardous Materials Near Schools: Project and Cumulative); Threshold 4.7-3 (Hazardous Materials Sites: Project and Cumulative)
- **Noise** – Threshold 4.10-1 (Construction Noise: Project and Cumulative); Threshold 4.10-2 (Operation Noise: Project and Cumulative); Threshold 4.10-3 (Construction Vibration: Project and Cumulative)
- **Public Services** – Threshold 4.12-1 (Fire Protection: Project); Threshold 4.12-2 (Police Protection: Project); Threshold 4.12-3 (School Facilities: Project)
- **Recreation** – Threshold 4.13-1 (Deterioration of Recreational Facilities: Project and Cumulative); Threshold 4.13-2 and Threshold 4.13-3 (Construction of Recreational Facilities: Project and Cumulative)

- **Transportation** – Threshold 4.10-3 (Highway Safety Resulting from Design Features or Incompatible Uses: Project and Cumulative)
- **Tribal Cultural Resources** – Threshold 4.15-1 (Construction: Project and Cumulative)
- **Wildfire** – Threshold 4.17-1 (Impair Emergency Response Plan: Project and Cumulative), Threshold 4.17-2 (Exacerbate Wildfire Risks in State Responsibility Area or VHFHSZ: Project and Cumulative), Threshold 4.17-3 (Require Infrastructure that may Exacerbate Fire Risk: Project and Cumulative), Threshold 4.17-4 (Expose People or Structures to Significant Risks in State Responsibility Area or VHFHSZ: Project and Cumulative), Threshold 4.17-5 (Expose People or Structures to Significant Risks Involving Wildland Fires: Project and Cumulative)

The following issues were found to have impacts that would be reduced to a less-than-significant level with implementation of mitigation measures:

- Air Quality (Construction TACs)
- Hydrology and Water Quality (Impeding or Redirect Flood Flows)
- Transportation (Conflict with Circulation Plan, Policy, Ordinance; VMT; Construction Hazard due to Geometric Design; Emergency Access)

Outside of a complete moratorium or a program to reduce new housing development, none of the impacts aside from the three listed above could be reduced to below a level of significance. Any program or policy to limit housing development would not meet the underlying purpose of the Housing Element Update. Moreover, certain impacts (e.g., operational air quality, deterioration of parks) are not location specific and could only be addressed by reducing the amount of new development, which would not meet the City's legal obligation to accommodate new housing per the RHNA. Other impacts (e.g., construction-related air quality, noise, and vibration impacts) cannot be meaningfully addressed because they would occur regardless of the location, size, or nature of new housing development. Still other impacts (e.g., archaeological resources, biological resources) are location specific, but the lack of available information about individual sites at this stage of planning makes developing an alternative to address these impacts infeasible. Even limiting development to avoid significant impacts to one resource may simply divert more growth and development to other areas of the City, thus increasing the potential for similar impacts in other areas of the City. Diverting growth and development to other areas that have few transit options may even increase overall regional air pollutant emissions and vehicle miles traveled (VMT) compared to focusing more development under the Rezoning Program.

For the above reasons, the range of alternatives that could meaningfully address the Proposed Project's significant environmental impacts and still meet most of the basic project objectives is limited. Two alternatives, including the CEQA-required "no project" alternative, are studied herein. These include:

- Alternative 1: No Project
- Alternative 2: Redistribution of Rezoning Program

Consideration of Alternative 1, which involves continuing to implement the current General Plan Housing Element and Safety Element, is required under CEQA. Alternative 2 would redistribute the rezone sites to avoid areas of known sensitivity for issues such as historic resources, paleontological resources, and contaminated (hazardous material) sites. Although impacts related to these issues cannot be completely eliminated through Alternative 2, available information about the locations of these potential environmental constraints allows Alternative 2 to meaningfully reduce the overall potential for impacts related to historic resources, paleontological resources, and hazardous material sites. Alternative 2 would include the same update to the Safety Element as described for the Proposed Project. The population forecasts for 2029 in both alternatives is the same as the Proposed Project, which is accommodating existing growth forecasts, and will be 4,309,231 population and 1,557,966 households.

6.4 ANALYSIS METHODOLOGY

The analysis herein compares the impacts of the Proposed Project to those of each alternative, concluding whether the alternative's impact would be less than, similar to, or greater than that of the Proposed Project. For purposes of this analysis, an impact of an alternative would be considered greater than or less than that of an impact of the Proposed Project if the alternative results in a different impact conclusion as compared to the Proposed Project. In instances where the impact would be less than or greater than that of the Proposed Project, the analysis also concludes whether the alternative would either create or avoid a significant impact and discusses what, if any, mitigation would be required for the alternative.

6.5 COMPARATIVE IMPACT ANALYSIS

6.5.1 Alternative 1: No Project Alternative

a. Alternative Description

The "No Project" Alternative involves continued implementation of the 2013-2021 Housing Element. Under this alternative, the current Housing Element policies would continue to apply and no change in land use or zoning designations to accommodate the 6th cycle RHNA would occur. The RHNA allocation under the 2013-2021 Housing Element is 82,002 residential units, of which 32,862 are required to be lower income

units. Based on the 2020 Annual Element Progress Report, the City has permitted 117,088 housing units and, therefore, has exceeded the overall total units accommodated under the 2013-2021 Housing Element cycle. However, the City has only met a portion of the lower income RHNA required to be accommodated under the 2013-2021 Housing Element cycle, with 10,739 lower income units permitted.

The overall number of new units accommodated under the No Project Alternative would be anticipated to be lower than those expected to be accommodated by the Proposed Project. This is due to the fact that under Alternative 1, the Rezoning Program which is needed to accommodate the build out of the City's RHNA, would not occur within the three-year time period. The Housing Element Update finds that there is an anticipated development potential of 266,647 housing units that can be accommodated under current zoning in the City; however, it would be speculative to determine the number of units that would occur during the planning period under the No Project Alternative. This is because of the fact that the City has an ongoing Community Plan Update program, as described in Chapter 3, *Project Description*, which is separate from the Proposed Project and would be expected to continue to occur under the No Project Alternative. Additionally, it is possible that the penalties imposed as a result of the City's failure to adopt a compliant Housing Element by the statutory deadline (see below) may result in a slightly higher number of housing units that can be accommodated based on current zoning. For these reasons, it is speculative at this time to project the number of additional housing units that may be expected under the No Project Alternative. Regardless, as this number is expected to be lower than the number of housing units anticipated under the Proposed Project, it would likely not meet the City's RHNA Allocation. As a large portion of the RHNA Allocation is based on analysis of the number of housing units needed to existing housing need among the current population, this limitation on housing development in Los Angeles may cause development to occur elsewhere in the region to meet the SCAG population and housing projections. This may introduce significant and unavoidable impacts related to such issues as air quality and greenhouse gas (GHG) emissions, energy, VMT and population displacement elsewhere in the region.

Additionally, under the No Project Alternative, the policy changes proposed as part of the Proposed Project would not occur. This would mean that the City would continue existing policies in the 2013-2021 Housing Element and General Plan Framework Element that emphasize the importance of accommodating housing production in areas well-served by transit, but new policies that place additional focus on accommodating housing production in higher resource areas and preventing displacement would not be adopted.

The No Project Alternative would not meet the underlying purpose of the project, nor any of the six objectives listed Section 3, *Project Description*. Most importantly, the No Project Alternatives would not be consistent with the **Underlying Purpose**, which is to accommodate the Regional Housing Needs Assessment compliant with State law and consistent with the City's General Plan; with **Objective 1,** which aims to fulfill the State requirements regarding updates to the Housing Element and SCAG's RHNA

allocation; or with **Objective 6**, which aims to update the City's Safety and Health Elements to be consistent with current State regulations. If the City's Housing Element Update does not fulfill the State's requirements, the City's Housing Element compliance could be revoked and the issue may be addressed by the California Office of Attorney General.

Jurisdictions that fail to adopt a compliant Housing Element by the deadline face potential loss of eligibility for certain state and federal funding programs for affordable housing in addition to other penalties that may be imposed by a court or potentially under the Housing Accountability Act (GC Section 65589.5(d)), such as potential limiting of some of the City's land use authority which may result in other significant and unavoidable impacts. For example, it is possible that, as a result of the potential limitations imposed on the City's land use authority, the No Project Alternative may result in more housing units being accommodated in environmentally sensitive areas than may otherwise be permitted under the Proposed Project.

Additionally, failure to adopt the Housing Element Update within 120 days from the statutory adoption date has an additional consequence of decreasing the planning period from an 8-year period to a 4-year update period (GC Section 65588(e)(4)).

This alternative would only partially meet **Objective 2**, which aims to increase the availability of affordable housing and the variety of housing options in the city; however, as noted above, the potential loss of state and federal funding for affordable housing would limit the City's ability to meet Objective 2. Additionally, the No Project Alternative would not be consistent with **Objective 3**, which aims to promote concentrated housing growth in High and Very High Resource areas and in areas with good access to jobs, services, and high-quality public transit; **Objective 4**, which aims to strengthen the City's goals, policies, objectives and programs that prevent displacement, promote homeless prevention and diversion, and promote housing stability; and **Objective 5**, which aims strengthen the City's goals, policies, objectives and programs that reduce greenhouse gas emissions and promote climate resiliency.

b. Impact Analysis

Aesthetics

The Initial Study found that the Proposed Project would result in less than significant impacts associated with scenic highways and the creation of new sources of light and glare. The Initial Study also found that impacts associated with the Safety Element would be less than significant (see Appendix A).

Similar to the Proposed Project, Alternative 1 would have less than significant impacts related to scenic highways and light and glare based on existing regulations. Under the No Project Alternative, housing development would continue under current land use designations throughout the City. As with the

Housing Element Update, housing development accommodated under Alternative 1 would alter the visual character of portions of the City, including increased building height and massing. However, the Rezoning Program to meet the 6th cycle RHNA would not occur, so housing would not be expected to occur on any of the proposed rezone sites and the overall amount of new housing accommodated would be potentially lower citywide than under the Housing Element Update. As such, the potential to affect scenic vistas would be somewhat lower than under the Housing Element Update. In addition, although new development under this alternative would generally enhance the visual character of the City, the enhancements would be less than under the Housing Element Update. Under the No Project Alternative, development would be consistent with applicable zoning and other regulations in the existing Housing Element and would be consistent with Framework Element policies. The overall impact to scenic vistas and the visual character of the City under the No Project Alternative would be somewhat lower than under the Housing Element Update. As with the Housing Element Update, the impact would be ***less than significant***.

Air Quality

As discussed in the Initial Study (see Appendix A), air quality impacts associated with the Safety Element were found to be less than significant. The Initial Study also scoped out other air impacts, such as odors.

Similar to the Proposed Project, Alternative 1 would have no impacts related to odors and would have less than significant impacts to TACs. The No Project Alternative would be expected to accommodate fewer new residences citywide than would the proposed Housing Element Update. Similar to the Proposed Project, the No Project Alternative would not foreseeably interfere with the AQMP. The overall emissions of Alternative 1 would be commensurately lower than under the Housing Element Update; nevertheless, both construction and operational emissions under this alternative would continue to exceed South Coast Air Quality Management District's (SCAQMD) regional and local significance thresholds. Because implementation of Alternative 1 would not require any discretionary approvals, the City would not impose **Mitigation Measures AQ-4.2-2(a)** and **AQ-4.2-2(b)** to reduce potential construction and operational emissions from individual development projects. However, discretionary projects would be required to go through environmental review and would be subject to similar mitigation measures, if necessary, to reduce significant impacts. It is possible that large projects, or projects with unusual circumstances, would result in emissions that exceed of SCAQMD significance thresholds. In any case, impacts would be less than the Proposed Project but would continue to be ***significant and unavoidable*** under Alternative 1.

Biological Resources

The Initial Study (Appendix A) concludes that the Proposed Project (Housing Element Update and Safety Element Update) could have potentially significant effects with respect to special-status species, nesting birds, and wildlife movement, but does not have the potential to result in significant effects to other

biological resources, such as Significant Ecological Areas (SEAs); wetlands, streams, rivers; Habitat Conservation Plans (HCPs); and other applicable plans, policies, and ordinances related to biological resources. Based on comments on the NOP, the City scoped local ordinance into the EIR. Alternative 1 also would have less than significant or no impacts related to wetlands, streams, rivers and HCPs based on existing regulations and the fact there are no HCPs in the City.

Urbanization has substantially reduced the abundance and diversity of biological resources in Los Angeles, particularly in the central and southern portions of the City. Remaining open space in the City's 478 square miles is primarily limited to approximately 214 square miles of mountainous terrain that bounds the San Fernando and San Gabriel valleys, the eastern end of the Santa Monica Mountains, isolated portions of the coast, and limited areas along the Los Angeles River. Similar to the Proposed Project, implementation of the No Project Alternative could foreseeably result in impacts to special-status species and/or their habitat in existing natural areas. Although Alternative 1 would be expected to accommodate fewer new residences citywide than would the proposed Housing Element Update, the development that is already allowed and would occur under the No Project alternative would be the development most likely to have the potential to disturb sensitive vegetation communities, wetlands and other waters, plant or animal species such as nesting birds and heritage or protected trees, and wildlife movement in the City. The Rezoning Program which would not be adopted with the Proposed Plan is not seeking to allow more housing in sensitive natural communities or where special status species would be most likely located. With existing sites that are zoned residential in the hillsides and near undeveloped areas, vegetation clearing and excavation during construction of new housing could remove habitat and/or individuals, and excavation, ground clearing, equipment and materials storage, access routes, and other activities could result in indirect impacts to habitat. Additionally, as discussed above, under the No Project alternative, the City may lose land use controls that may result in more housing in sensitive environments and result in greater impacts to special status species and sensitive habitats, and wildlife corridors. Future development under either the No Project Alternative or the Proposed Project would require adherence with the federal Migratory Bird Treaty Act (MBTA) and/or the California Fish and Game Code (CFGC) regulations, the LAMC Tree Preservation Ordinance (177,404), and regulations regarding Heritage Trees. Housing development that would occur under Alternative 1 would not be subject to **Mitigation Measures 4.3-1(a)** through **4.3-2(b)**, which would apply to the Proposed Project. However, discretionary projects would be required to go through environmental review and would be subject to similar mitigation measures, if necessary, to reduce significant impacts. Therefore, impacts under Alternative 1 would be greater than the Proposed Project. As with the Proposed Project, potential biological resources impacts would be ***significant and unavoidable***.

Cultural Resources

As discussed in the Initial Study (see Appendix A), impacts to human remains were found to be less than significant and were, therefore, scoped out of this EIR. In addition, all impacts from the Safety Element associated with cultural resources were found to be less than significant in the Initial Study.

Similar to the Proposed Project, Alternative 1 would have less than significant impacts related to human remains based on existing regulations. Similar to the proposed Housing Element Update, implementation of the No Project Alternative may result in demolition or alteration of historical resources and/or disturb areas that may potentially contain archaeological resources. Alternative 1 would accommodate development consistent with current land use designations and would not include the Rezoning Program to accommodate additional residential development that meets the 6th cycle RHNA. As such, it would be expected to accommodate fewer new residences citywide and would potentially have somewhat less potential to disturb historical and archaeological resources as compared to the proposed Housing Element Update. All future development projects would continue to be subject to existing federal, State, and local requirements with respect to cultural resources. **Mitigation Measures 4.4-1(a)** through **4.4-1(j), 4.4-2, 4.15-1(a),** and **4.15-1(b)** would not be imposed on development under Alternative 1. However, discretionary projects would be required to go through environmental review and would be subject to similar mitigation measures, if necessary, to reduce significant impacts. The Rezoning Program emphasizes putting more housing in infill sites near and around historical resources. Therefore, this Alternative would potentially result in fewer significant impacts to historical resources. Impacts to archaeological resources would also be fewer with Alternative 1 based on the total number or developments expected to occur, yet would still be significant. Consequently, overall impacts to cultural resources would be less than those of the proposed Housing Element Update but would remain ***significant and unavoidable***.

Geology and Soils

As discussed in the Initial Study (see Appendix A) to this EIR, all impacts associated with Geology and Soils were scoped out of the EIR with the exception of impacts related to paleontological resources and unique geologic features. In addition, all impacts from the Safety Element associated with geologic conditions and soils were found to be less than significant in the Initial Study.

Similar to the Proposed Project, based on existing regulations on housing development, Alternative 1 would have less than significant impacts to all Geology and Soils criteria except paleontology and unique geological formations. Table 4.5-1 in Section 4.5, *Geology and Soils*, describes the paleontological sensitivity of the geologic units in the City and Figure 4.5-2 shows the paleontological sensitivity throughout the City. Like the proposed Housing Element Update, development that may occur under Alternative 1 would primarily be located on infill sites that have been previously developed and/or disturbed and would be

unlikely to affect paleontological resources. Because Alternative 1 would not include the Rezoning Program that is included under the Housing Element Update, it would be expected to accommodate fewer new residential units and thus would have somewhat less potential to disturb paleontological resources. **Mitigation Measures 4.5-1(a)** through **4.5-1(c)**, which would minimize potential impacts associated with the proposed Housing Element Update, would not apply. However, discretionary projects would be required to go through environmental review and would be subject to similar mitigation measures, if necessary, to reduce significant impacts. Paleontological resources would likely be less than that of Housing Element Update but would still be ***significant and unavoidable***.

Greenhouse Gas Emissions

As discussed in the Initial Study (see Appendix A), impacts from the Safety Element were found to be less than significant with respect to GHG emissions.

Development accommodated under either the No Project Alternative or the proposed Housing Element Update would generate GHG emissions through construction and operation of individual development projects. GHG emissions would specifically arise from direct sources such as motor vehicles, natural gas consumption, solid waste handling/treatment, and indirect sources such as electricity generation. Table 4.6-6 in Section 4.7, *Greenhouse Gas Emissions*, shows the forecasted activity level increases from source emissions over the No Project Alternative in 2029 as well as the related forecasted 2029 GHG emissions under the proposed Housing Element Update. The Proposed Project was consistent with SB 32, the 2017 Scoping Plan and the 2020-2045 RTP/SCS, as well as local plans and ordinances addressing GHGs. As shown in Table 4.6-6, implementation of the proposed Housing Element Update would result in an increase in GHG emissions of 1,089,803 $MTCO_2e$, equating to an emission rate of 0.9 $MTCO_2e$ per service population, which indicates consistency with state GHG goals. Alternative 1 would not accommodate the City's RHNA and therefore, may result in housing being displaced outside the City or in areas with higher VMT per capita and higher GHG per capita emissions. While the City's current 2013-2021 Housing Element is consistent with the goals and policies of the RTP/SCS, because of the No Project Alternative's failure to comply with state requirements to plan for and accommodate forecast growth and existing need for housing, Alternative 1 would be less consistent with the goals and policies of the 2020-2045 RTP/SCS than the Proposed Project. Impacts from Alternative 1 to GHG would be ***significant and unavoidable***.

Hazards and Hazardous Materials

The Initial Study found that impacts associated with the Safety Element would be less than significant in the Initial Study (see Appendix A). It also found that the Housing Element Update would have less than significant impacts related to routine transport, use or disposal of hazardous materials, and hazards related to projects located within two miles of public airport, and interfering with emergency response or

evacuation plan, or hazards related to wildland fires (although this impact was scoped back in and addressed in Wildfire impact analysis).

Similar to the Proposed Project, Alternative 1 would have less than significant impacts related to routine transport, use or disposal of hazardous materials, and hazards related to projects located within two miles of public airport, and interfering with emergency response or evacuation plan. Alternative 1 would not involve the Rezoning Program and thus would be expected to accommodate fewer new residences than would the proposed Housing Element Update. Consequently, Alternative 1 would have incrementally less potential for upset or accident conditions involving hazardous materials release; although that impact was less than significant for the Proposed Project. Nonetheless, housing development accommodated under Alternative 1 would involve the redevelopment, renovation, and demolition of structures built during an era when materials such as asbestos and lead-based paint were used in construction, which could potentially release asbestos or lead into the atmosphere. In addition, future development could potentially occur in Methane Zones and Methane Buffer Zones and/or near oil wells. Compliance with the comprehensive and extensive federal, State, and local requirements governing hazardous materials, including those identified in the regulatory compliance measures, would reduce impacts associated with Polychlorinated Biphenyl (PCB), Lead and Asbestos, and Methane and Methane Hazards to a less than significant level, similar to the Proposed Project. As with the Housing Element Update, however, grading and construction activity could potentially result in the release of soil and/or groundwater contamination, which could adversely affect workers, nearby residents, and schools. **Mitigation Measures 4.7-2(a)** and **4.7-2(b)**, which would apply to the Housing Element Update, would not apply to this alternative. However, discretionary projects would be required to go through environmental review and would be subject to similar mitigation measures, if necessary, to reduce significant impacts. Because Alternative 1 would involve less overall potential for release of hazardous materials overall impacts associated with Alternative 1 would less than those of the proposed Housing Element Update but would still be ***significant and unavoidable***.

Hydrology and Water Quality

The Initial Study (see Appendix A) found less than significant impacts to surface water quality, groundwater levels, groundwater quality or altering the existing drainage pattern in a way to result in erosion, increase flooding, or increase runoff or stormwater.

As with the Proposed Project, housing development accommodated under the No Project Alternative would be required to comply with development standards set forth in federal and State construction and design requirements as well as the City's Zoning Code to reduce potential impacts to existing drainage patterns, as well as water quality and ground water levels. Furthermore, all housing development would

be required to comply with all other policies and programs outlined in additional regulatory and advisory documents such as the Local Hazard Mitigation Plan and the Floodplain Management Plan, much of which would be integrated into the General Plan through the Safety Element Update. Any project that may impede or redirect flood flows would be subject to review and mitigation similar to that identified for the Project, and would result in less than significant impacts. Therefore, as with the Proposed Project, Alternative 1 would result in ***less than significant*** impacts with respect to hydrology and water quality.

Land Use and Planning

As discussed in the Initial Study (see Appendix A), the proposed Housing Element Update was found to have no impacts associated with the physical division of an established community; therefore, further analysis of such impacts was scoped out of this EIR. In addition, all impacts from the Safety Element associated with land use and planning were found to be less than significant in the Initial Study.

Similar to the Proposed Project, the No Project Alternative would have no impact to physically dividing an established community. Under the No Project Alternative, the Rezoning Program would not occur and development would continue under current General Plan designations. Goals, objectives, and policies of the current 2013-2021 Housing Element would generally further citywide housing priorities, including addressing the housing shortage, protecting City residents, promoting sustainability and resilience through housing, and addressing homelessness. As discussed under GHG, failure to adopt a Housing Element to accommodate the RHNA could result in land use patterns that are not consistent with the goals and policies of SCAG's 2020-2045 RTP/SCS. The current Housing Element would not meet the requirements of recent changes to state housing law, nor would it enable to the City to meet its 6th cycle RHNA allocation. As discussed in Section 4.9, *Land Use and Planning*, the proposed Housing Element Update would be generally consistent with the City's General Plan and strategies in SCAG's 2020-2045 RTP/SCS. As discussed above, the City could be subject to a loss of land use controls if it does not comply with State Housing laws and adopting an update to the Housing Element for the 6th Cycle. Because Alternative 1 would not be consistent with current State and regional requirements related to housing production, its impact would be ***significant and unavoidable*** and greater than that of the Proposed Project.

Noise

As discussed in the Initial Study (see Appendix A), noise impacts associated with the Safety Element Update were found to be less than significant.

Construction associated with housing development accommodated under Alternative 1 would be similar to that of the Housing Element Update, though the overall amount of construction activity would be expected to be lower due to the anticipated reduction in new housing citywide. Noise at individual sites could exceed City standards, but construction activity would be required to comply with RCM-NOI-1

through 3 as well as LAMC Section 112.05 and Section 41.40. Nevertheless, as with the Proposed Project, future larger developments could involve construction with lengthy durations, substantial soil movement, use of large, heavy-duty equipment, and/or pile driving near noise-sensitive land uses that would result in significant impacts that also may not be feasibly mitigated. **Mitigation Measures 4.10-1(a)** through **4.10-1(f)** would not apply. However, discretionary projects would be required to go through environmental review and would be subject to similar mitigation measures, if necessary, to reduce significant impacts. Therefore, overall impacts would be less with Alternative 1 to those of the proposed Housing Element Update but would remain ***significant and unavoidable***.

With regard to permanent operational noise, as with the Housing Element Update, individual housing developments under the No Project Alternative would include mechanical equipment (i.e., HVAC), delivery and trash trucks, and other noise-generating activities which are typical of the urban environment. Mobile noise would be similar based on the forecasted population growth and on-site activities would be required to comply with applicable RCMs and LAMC standards. However, the overall amount of operational noise would be expected to be lower due to the anticipated reduction in new housing citywide. However, sufficient reduction in operational noise levels cannot be assured for all projects, even with compliance with all City standards, particularly those projects with multiple outdoor uses (e.g., pool and roof decks). As such, operational noise at various sensitive land uses could result in significant impacts. **Mitigation Measure 4.10-2** would not apply. Rather, discretionary projects would be required to go through environmental review and would be subject to similar mitigation measures, if necessary, to reduce significant impacts. Therefore, permanent noise increases due to operation of development under Alternative 1 would be less with Alternative 1 to those of the proposed Housing Element Update but would remain ***significant and unavoidable.***

Housing development under the No Project Alternative is not anticipated to involve operational activities that would result in substantial vibration levels (e.g., use of heavy equipment). However, as with the Housing Element Update, construction activities under the No Project Alternative, such as pile driving, could potentially generate vibration exceeding thresholds for buildings susceptible to damage (e.g., historic structures). Although mitigation is available (**Mitigation Measures 4.10-3[a]** and **4.10-3[b]**) to reduce the potential effects of vibration, this mitigation would not apply to continued implementation of the current Housing Element. However, discretionary projects would be required to go through environmental review and would be subject to similar mitigation measures, if necessary, to reduce significant impacts. Therefore, under Alternative 1, impacts related to construction vibration would be less with Alternative 1 but would remain ***significant and unavoidable***.

Housing developments under Alternative 1 could be exposed to intermittent noise levels from overhead flight patterns from several airports in and around the City. While Alternative 1 would not emphasize

building housing in the immediate vicinity of airports, all residential development would be required to incorporate noise insulation features per State and local standards to reduce interior noise levels to below 45 dBA. Similar to the proposed Housing Element Update, Alternative 1 would result in ***less than significant*** impacts associated with airport and airstrip operations.

Population and Housing

The existing 2013-2021 Housing Element (the No Project Alternative) is out of date and would not allow the City to meet the 6th cycle RHNA allocation as it would not include the required Rezoning Program. It would not, however, accommodate or induce growth beyond that forecast for the City so would not result in environmental impacts related to unplanned population or housing growth. The proposed Housing Element Update is intended to comply with State law to accommodate the RHNA and, as discussed in Section 4.11, *Population and Housing*, would not cause growth or induce growth, but rather, would accommodate the City's current and future housing needs. Similar to the proposed Housing Element Update, environmental impacts associated with Alternative 1 would be less than significant, though Alternative 1 would not fully meet the City's housing needs through 2029 per the 6th cycle RHNA.

Alternative 1 would not result in update to the Safety Element. However, impacts from the Safety Element related to displacement were less than significant. Alternative 1 would have no impact to displacement.

Public Services

As discussed in the Initial Study (Appendix A), the Proposed Project (Housing Element and Safety Element Update) would not affect the need for new or physically altered public libraries and impacts would be less than significant. Therefore, further analysis of impacts related to library facilities were scoped out of this EIR.

Similar to the Proposed Plan, Alternative 1 would not result in impacts from public libraries. Housing development under the No Project Alternative would be expected to accommodate fewer new housing units citywide than would the Proposed Project, but would still increase demand for fire and police protection services, and schools in the City as the population forecasts would be the same under the SCAG RTP/SCS. Alternative 1 would foreseeably result in the need for new or expanded fire and/or police protection facilities or schools, although police and fire service demand may be less with less construction activity. The size and location of new facilities for police, fire and schools is not known at this time. Nevertheless, as with the Proposed Project, impacts would be potentially significant, particularly for larger developments and developments with limited emergency access. **Mitigation Measures 4.12-1(a)** through **4.12-1(d), 4.12-2(a),** and **4.12-2(b)** for the Proposed Project would not apply. However, discretionary projects, including any new facilities for fire services, police services, or schools, would be required to go through environmental review and would be subject to mitigation measures, if necessary, to reduce

significant impacts. Although even with mitigation measures, significant impacts related to construction may still occur based on site specific conditions (such as historical resources, or archaeological resources.) Thus, overall impacts associated with this alternative would be similar to those of the Proposed Project and would be ***significant and unavoidable***.

Recreation

The updates to the Safety Element would not add population or change the use patterns of the City's parks and recreational facilities. Therefore, the Safety Element Update would not result in any adverse impacts related to recreation, as discussed in the Initial Study (see Appendix A).

Alternative 1 would be expected to accommodate fewer housing units citywide than would occur under the proposed Housing Element Update, but the population forecasts and demand on parks and recreational facilities would be the same based on SCAG's SCS/RTP forecasts. Therefore, similar to the Proposed Project, Alternative 1 would result in deterioration of existing parks which is a significant unavoidable impact and the need for new or rehabilitated parks and recreational facilities, which may result in significant unavoidable impacts based on construction and site specific conditions (such as archaeological resources). As with the Housing Element Update, mitigation for these impacts is not available and impacts would be similar to those of the Housing Element Update and ***significant and unavoidable***.

Transportation

The Safety Element was found in the initial study to have less than significant impacts to all transportation impact criteria.

Impacts from Alternative 1 related to conflicting with a program, plan, ordinance or policy addressing the circulation system, hazardous design or incompatible use, and inadequate emergency access would be similar to the Proposed Project. Although **Mitigation Measures 4.10-1** and **4.10-2** in the DEIR would not apply, projects that would be likely to result in impacts based on construction activities would be subject to existing regulatory requirements and environmental review where a similar mitigation measure would be imposed, if necessary, to reduce impacts. Therefore, for these impacts, Alternative 1 would have less than significant impacts. With less development, this Alternative 1 would foreseeably have less impacts to freeway congestion and off ramp queuing but they still would remain ***significant and unavoidable***.

With respect to VMT, Alternative 1 would be expected to have potentially worse VMT per capita. The Rezoning Program included in the Proposed Project focuses on putting housing in areas near transit and High Opportunity Areas, where VMT per capita is generally good. The City's current growth strategy prioritizes housing development in areas near transit and in ways that facilitate a jobs-housing balance; however, under the No Project Alternative the City may potentially have more limited land use authority

as a result of the penalties for Housing Element noncompliance, which could mean that larger housing development projects are built in areas that may be inconsistent with the City's overall growth strategy and could have worse VMT impacts. Additionally, failure to adopt the Housing Element Update to accommodate the existing need and forecasted need may result in more housing production outside the City in areas with worse VMT and worse jobs/housing balance.

VMT impacts could potentially be reduced to some degree through the implementation of transportation demand management (TDM) measures such as:

- *Additional bicycle facilities:* In addition to the bicycle lanes in the alternative plans, facilities such as secure bicycle parking (short-term and long-term racks and lockers), showers, and personal locker facilities help reduce peak period and daily automobile trips.
- *Bike share membership:* Discounts on bike share memberships to residents or employees could encourage the use of the local bike share system and bicycle facilities.
- *Discounted transit passes:* Discounts on transit passes to residents or employees in lieu of using a parking space on or near to their destination could incentivize commuters to use transit.
- *Incentives to use alternative modes:* Property owners could use incentives for alternative transportation mode use, such as bicycle purchase, bicycle repair/maintenance, or annual transportation passes.
- *Integrated mobility hubs*: Integrated Mobility Hubs are envisioned as a requisite part of fixed rail transit stations in support of extending the accessibility of those new stations beyond the traditional one-half mile radius that is comfortable for pedestrian access. These hubs implement the concept of "first/last mile" access utilizing the integration of local shuttle buses, shared cars, and shared bicycles as means for extending the utility and patronage of the transit stations.
- *On-site childcare:* On-site childcare could reduce vehicle trips, as children could be taken to an employee's place of work in one trip, instead of necessitating a second trip to the daycare facility.
- *Parking cash out:* In cases where tenants pay for or subsidize parking for employees, a cash out involves the tenant giving employees the option of receiving a payment equal to the cost of a parking space instead of having access to the space.
- *Parking supply/pricing:* Pricing off-street lots at the same rate as on-street meters. This strategy, combined with an app or website with updated pricing information, helps to decrease the number of drivers circling blocks looking for cheaper parking.
- *Shared vehicle services:* Buildings with shared vehicle services, either provided by an outside party or the building management, would encourage residents or employees to take other modes the majority of the time, as they could use a shared vehicle when necessary.

- *Shuttle or vanpool:* Depending on the density of users on a particular route, shuttles or vanpools could help reduce trips in providing a carpooling service. Regular service for free or very minimal cost would be the most enticing to users.
- *Telecommuting:* Telecommuting provides an alternative to home-to-work trips. The City could encourage incorporation of new technologies supporting telecommuting into new office and residential developments.
- *Unbundle parking:* By selling or leasing parking separately from the lease or purchase price, tenants can purchase or rent a parking space for an additional cost. This disincentivizes tenants from having a parking space, and helps to promote alternative modes.

However, at this time it is not possible to estimate the effectiveness of these TDM strategies or to ensure that such measures would be implemented. Therefore, potential VMT impacts under the No Project Alternative would be ***significant and unavoidable***.

Tribal Cultural Resources

Impacts from the Safety Element Update to tribal cultural resources were found to be less than significant in the Initial Study (see Appendix A).

As described in Section 4.4, *Cultural Resources*, Los Angeles has a long history of Native American habitation, and any development activities that include ground disturbance have the potential to significantly impact tribal cultural resources. Effects on tribal cultural resources are only known once a specific development has been proposed because the effects are highly dependent on both the individual development site conditions and the characteristics of the proposed activity. Development accommodated by Alternative 1 may disturb areas that potentially contain tribal resources. Similar to the proposed Housing Element Update, all future development projects would continue to be subject to existing federal, State, and local requirements and discretionary projects may be subject to project-specific mitigation requirements under CEQA and the requirements of AB 52, which include consultation with California Native American tribes. The overall amount of new development and potential for disturbance of resources would be potentially lower under Alternative 1, but impacts under Alternative 1 would be potentially significant. **Mitigation Measures 4.4-2, 4.15-1(a),** and **4.15-1(b)** for the Proposed Project would not apply. However, discretionary projects would be required to go through environmental review and would be subject to similar mitigation measures, if necessary, to reduce significant impacts. Therefore, impacts due to housing development accommodated under Alternative 1 would be less than those of the proposed Housing Element Update but would remain ***significant and unavoidable***.

Utilities and Service Systems

As discussed in the Initial Study (see Appendix A), implementation of the Housing Element Update would result in less than significant impacts related to solid waste generation and compliance with federal, State, and local statues related to solid waste. Also, impacts to utilities and service systems from the Safety Element were found to be less than significant in the Initial Study.

Similar to the Proposed Project, Alternative 1 would have less than significant impacts to solid waste and compliance with laws related to solid waste based on the City's practices and available land fill capacity.

The No Project Alternative would generally result in the same demand on wastewater treatment facilities as the Proposed Project based on RTP/SCS forecasts. As with the proposed Housing Element Update, housing development under Alternative 1 may require minor upgrades for the conveyance of wastewater. However, as Alternative 1 would potentially result in less construction of residential units, there would be less demand for new conveyance lines, although there would be demand for upgrades similar to the Housing Element based on overall wastewater loads. However, like the Proposed Project, the environmental impacts associated with the construction or relocation of potentially required new or expanded wastewater infrastructure would be temporary and less than significant. Existing wastewater treatment plants serving the City have adequate capacity to treat wastewater generated by the proposed Housing Element Update. Alternative 1 would generate approximately the same demand based on RTP/SCS growth forecasts; therefore, impacts related to wastewater facilities would be ***less than significant***.

As with the proposed Housing Element Update, residential developments accommodated under Alternative 1 would adhere to citywide regulations, such as the Low Impact Development and Model Water Efficient Landscape Ordinance to reduce stormwater run-off. Because Alternative 1 is not anticipated to require or result in the relocation or construction of new or expanded stormwater conveyance systems that would cause significant environmental impacts, impacts would be ***less than significant,*** similar to those of the proposed Housing Element Update.

Alternative 1 would have the same demand on water supply as the proposed Housing Element Update based on SCS/RTP forecasts. As with the proposed Housing Element Update, impacts to water supply would be less than significant. Like the Housing Element Update, development under this alternative would require minor new or expanded water line upgrades to serve residential developments but fewer than the Housing Element Update. However, the environmental impacts associated with the construction or relocation of potentially required new or expanded water facilities would be temporary and ***less than significant***. LADWP plans to replace approximately 500 miles in the next 10 years giving the highest priority to pipes with high risk of failure. Such upgrades would likely occur within existing utility

easements and would not result in new areas of disturbance. However, prior to ground disturbance, a project contractor would have to coordinate with LADWP to identify the locations and depth of all lines. Furthermore, implementation of RCM-UTIL-1 would require a system analysis for individual projects to determine whether existing LADWP water supply facilities can provide the proposed fire flow requirements. Similar to the proposed Housing Element Update, impacts related to water supply and distribution facilities would be ***less than significant*** under Alternative 1.

Wildfire

Impacts from the Safety Element Update related to Wildfire were found to be less than significant in the Initial Study (see Appendix A).

Like the proposed Housing Element Update, Alternative 1 would generally direct development away from areas of the City designated as Very High Fire Hazard Severity Zones (VHFHSZs). Nevertheless, some areas designated as VHFHSZs are zoned for residential use and could accommodate future housing development under Alternative 1. As discussed above, if the City fails to update the housing element for the 6th cycle it could result in a loss of land use control and more housing going into sensitive areas, such as VHFHSZs. Development in such areas would have the potential to impair implementation of an adopted emergency response plan or emergency evacuation plan due to the temporary obstruction of roads associated with construction activities on or near a designated emergency route, expose project occupants to pollutant concentrations from wildfire, require installation of infrastructure that may exacerbate fire risk, and expose people and structures to significant risks as a result of post fire conditions. **Mitigation Measure 4.17-1** for the Housing Element Update, which would reduce the potential for obstruction of roadways by regulating construction-related staging and parking for projects in hillside areas, would not apply. However, discretionary projects would be required to go through environmental review and would be subject to similar mitigation measures, if necessary, to reduce significant impacts. Therefore, impacts under Alternative 1 be greater than those of the proposed Housing Element Update and would be ***significant and unavoidable***.

c. Conclusion

The No Project Alternative would be expected to accommodate fewer new housing units than would the Proposed Project and thus would have commensurately less overall impact with respect to such issues as construction air quality impacts and construction noise. Nevertheless, all the significant and unavoidable impacts associated with the Proposed Project would also occur under the No Project Alternative. These include impacts related to air quality, biological resources, cultural resources, geology and soils (specifically paleontological resources), hazards, public services, tribal cultural resources, construction

noise and vibration, recreation, and wildland fire. This alternative would also have a significant and unavoidable impact related to land use and transportation (VMT), and GHG.

6.5.2 Alternative 2: Redistribution of Rezoning Program

a. Alternative Description

To address the Proposed Project's significant and unavoidable impacts related to historical resources, paleontological resources, and hazardous materials , this alternative would redistribute rezone sites under the Rezoning Program to eliminate areas with high concentrations of historic resources, areas of high paleontological sensitivity, and industrial areas where there is relatively high potential for contaminated soil, shown on Figure 6-1a through Figure 6-1c. As a result, rezones to accommodate housing would be avoided in the following areas:

- **Historic Resource Concentrations:** older areas of City, such as portions of Downtown, Hollywood, Mid Wilshire, and San Pedro, and limited portions of the San Fernando Valley
- **Paleontological Sensitivity:** Portions of the Santa Susanna Mountains north of the San Fernando Valley, portions of the Santa Monica Mountains between the San Fernando Valley and the Los Angeles Basin, portions of South and West Los Angeles, and portions of the Harbor area/San Pedro
- **Industrial Areas:** areas south of Downtown, South Los Angeles, and the Harbor area/San Pedro

Housing currently allowed in these areas (Opportunity Sites) would still occur.

As a result, areas where rezones would be focused under Alternative 2 include large portions of the San Fernando Valley and portions of West Los Angeles and South Angeles.

Alternative 2 would accommodate the same amount of housing as the proposed Housing Element Update citywide (420,327 units), including the same number of housing units accommodated by the Rezoning Program (approximately 220,000 units); however, it would change potential locations where these units are likely to occur. By relocating rezones outside areas of potential historical, paleontological, and hazardous material sensitivity, Alternative 2 would reduce environmental impacts related to these issues, but may result in increased impacts in other issue areas due to the increased concentration of development in certain areas of the City. By relocating rezones outside areas near transit, this alternative may also increase air pollutant and greenhouse gas emissions, and energy as a function of VMT, as compared to the focus of housing in transit-rich areas under the Housing Element Update. Because Alternative 2 proposes housing in areas with lower levels of transit service, it would be less consistent than the Proposed Project with **Objective 3**, which aims to promote concentrated housing growth in High and Very High Resource areas and in areas with good access to jobs, services, and high-quality public transit. In addition, Alternative 2

Figure 6-1a Alternative 2 – North Los Angeles

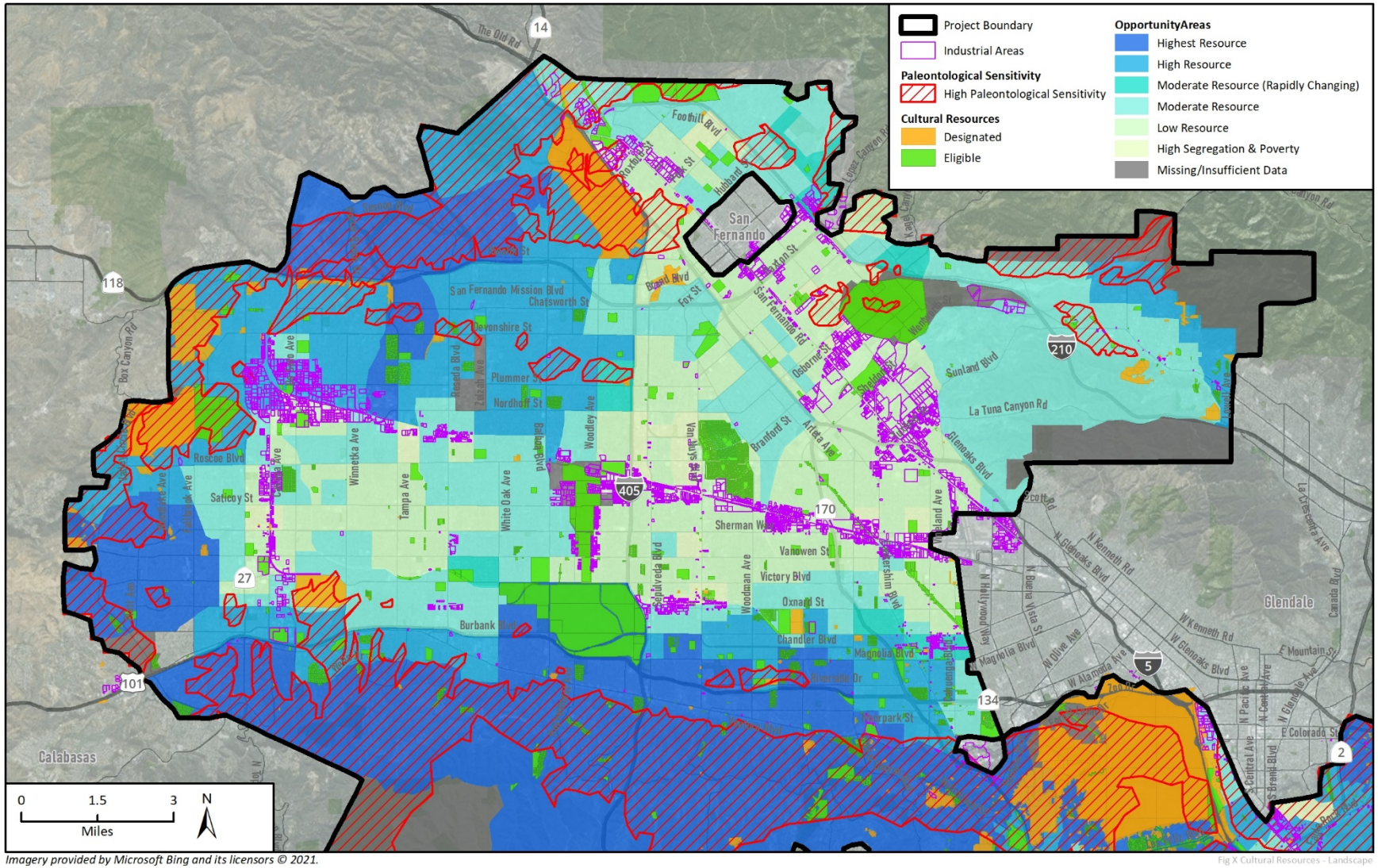

Figure 6-1b Alternative 2 – Central Los Angeles

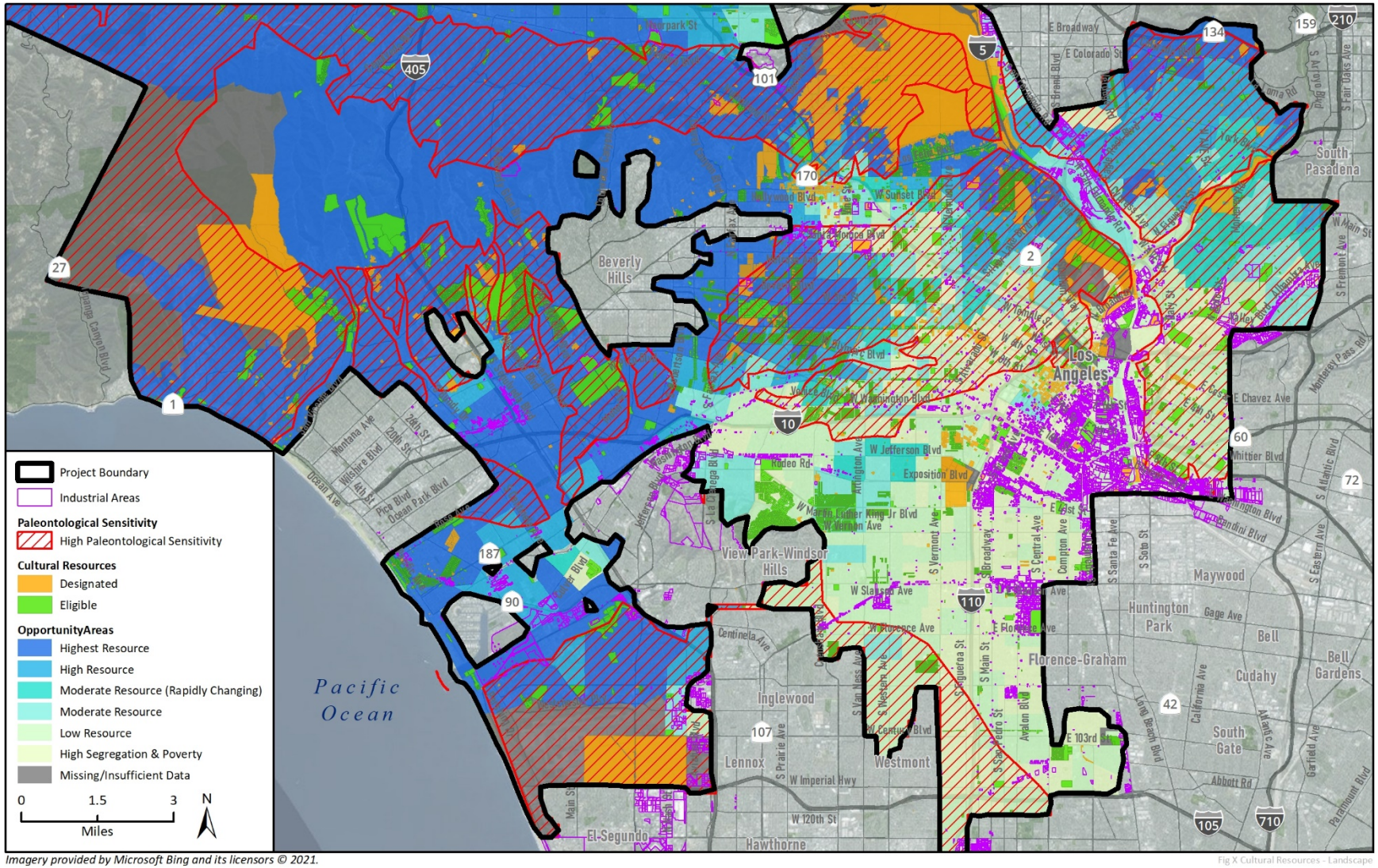

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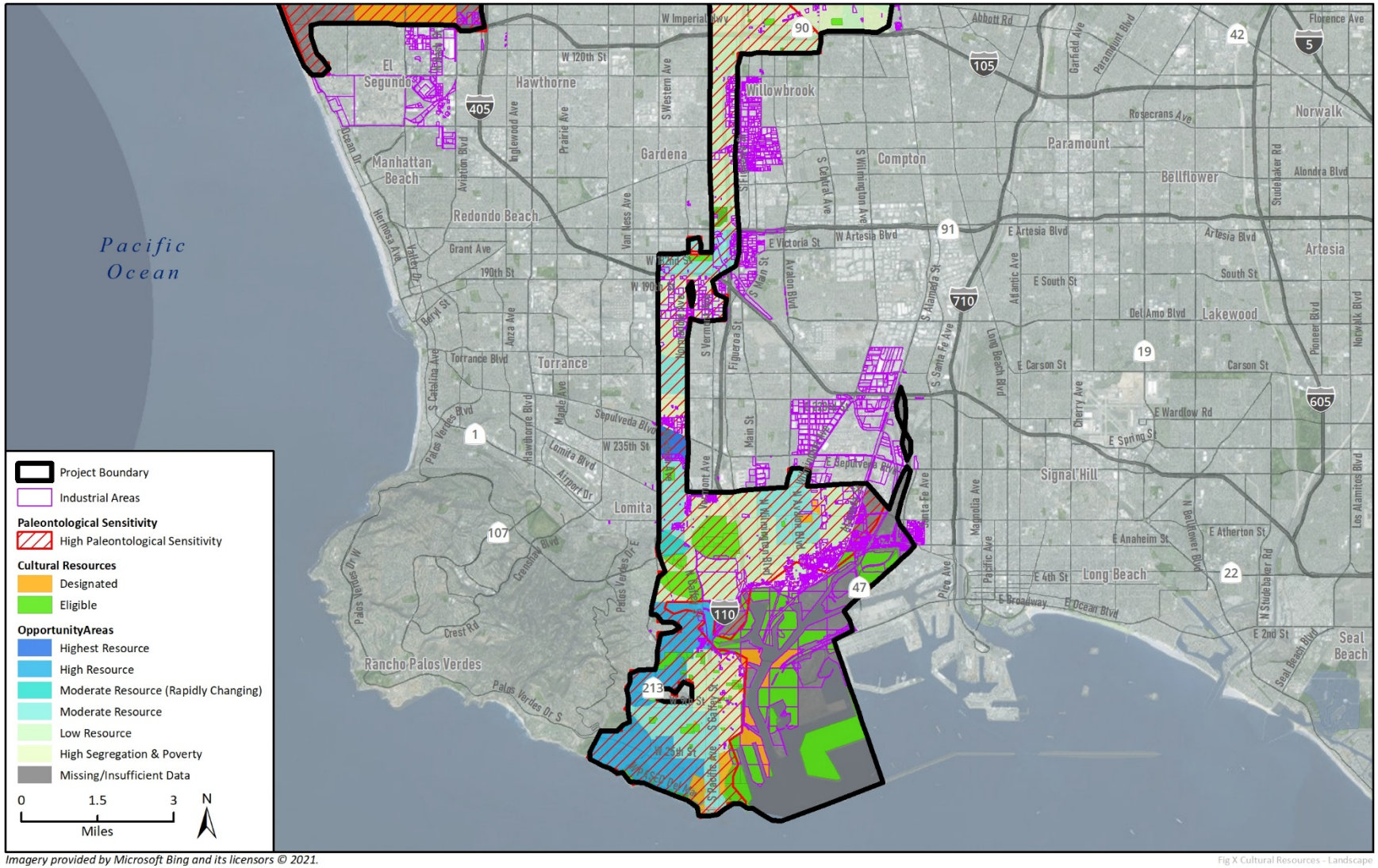
Fig X Cultural Resources - Landscape

Figure 6-1c Alternative 2 – South Los Angeles



would be less consistent with **Objective 5**, which aims strengthen the City's goals, policies, objectives and programs that reduce greenhouse gas emissions and promote climate resiliency.

b. Impact Analysis

Aesthetics

The Initial Study found that the proposed project would result in less than significant impacts associated with scenic highways and the creation of new sources of light and glare. The Initial Study found that impacts associated with the Safety Element would be less than significant in the Initial Study (see Appendix A). Similar to the Proposed Project, Alternative 2 would have less than significant impacts related to scenic highways and light and glare based on existing regulations.

As with the proposed Housing Element Update, housing development accommodated under Alternative 2 would alter the visual character of portions of the City, including increased building height and massing. However, certain areas of the City (e.g., Downtown, Hollywood, San Pedro) would accommodate less new housing development while other areas of the City (portion of the central San Fernando Valley, West Los Angeles, and South Los Angeles) would accommodate more new housing. The overall potential to affect scenic vistas would be similar to that of the Housing Element Update, though the potential for changes to vistas would be greater in such areas as the San Fernando Valley and portions of West and South Los Angeles that would include more rezone sites under this alternative. As with the Housing Element Update, new development under this alternative would generally enhance the visual character of the City, though the enhancements would be restricted to the above areas and the increase in overall building height and massing in these areas may have greater potential to create visual conflicts. As with the Housing Element Update, development under this alternative would be consistent with applicable zoning and other regulations in the existing Housing Element and with Framework Element policies. The overall impact to scenic vistas and the visual character of the City under Alternative 2 would be similar to that of the Housing Element Update and would be ***less than significant***.

Air Quality

As discussed in the Initial Study (see Appendix A), air quality impacts associated with the Safety Element were found to be less than significant.

Similar to the Proposed Project, Alternative 2 would have no impacts related to odors and would have less than significant impacts to TACs. Alternative 2 would accommodate the same number of new residences as the proposed Housing Element Update citywide. Similar to the Proposed Project, Alternative 2 would not foreseeably interfere with the AQMP. The overall air pollutant emissions would be similar to those of the Proposed Project and both construction and operational emissions under this alternative would exceed

South Coast Air Quality Management District's (SCAQMD) regional and local significance thresholds. Because this alternative would locate more development in areas more distant from transit routes, overall citywide VMT and associated emissions would likely be higher. **Mitigation Measures AQ-4.2-2(a)** and **AQ-4.2-2(b)** for the Housing Element Update would apply and would reduce potential construction and operational emissions from individual development projects to the degree feasible; nevertheless, as with the Housing Element Update, it is possible that large projects, or projects with unusual circumstances, would result in emissions that exceed of SCAQMD significance thresholds. Similar to the proposed Housing Element Update, potential air quality impacts associated with Alternative 2 would be ***significant and unavoidable*** and greater as a result of the increase to VMT.

Biological Resources

The Initial Study (Appendix A) concludes that the Proposed Project could have potentially significant effects with respect to special-status species, nesting birds, and wildlife movement, but does not have the potential to result in significant effects to other biological resources, such as Significant Ecological Areas (SEAs); wetlands, streams, rivers; Habitat Conservation Plans (HCPs); and other applicable plans, policies, and ordinances related to biological resources. Based on comments on the NOP, the City scoped local ordinance into the EIR. Alternative 2 also would have less than significant or no impacts related to wetlands, streams, rivers and HCPs based on existing regulations and the fact there are no HCPs in the City.

Similar to the proposed Housing Element Update, housing development under Alternative 2 could foreseeably result in impacts to special-status species and/or their habitat in existing natural areas. New development would have the potential to disturb sensitive vegetation communities, wetlands and other waters, plant or animal species such as nesting birds and heritage or protected trees, and wildlife movement in the City. Specifically, vegetation clearing and excavation during construction of new housing could remove habitat and/or individuals, and excavation, ground clearing, equipment and materials storage, access routes, and other activities could result in indirect impacts to habitat. Future development under either Alternative 2 or the Proposed Project would require adherence with the federal Migratory Bird Treaty Act (MBTA) and/or the California Fish and Game Code (CFGC) regulations, the LAMC Tree Preservation Ordinance (177,404), and regulations regarding Heritage Trees. Development under Alternative 2 would be subject to **Mitigation Measures 4.3-1(a)** through 4**.3-2(b)**, which would also apply to the Proposed Project. As with the Proposed Project, potential biological resources impacts would be ***significant and unavoidable***.

Cultural Resources

As discussed in the Initial Study (see Appendix A), impacts to human remains were found to be less than significant and were, therefore, scoped out of this EIR. In addition, all impacts from the Safety Element associated with cultural resources were found to be less than significant in the Initial Study.

Similar to the Proposed Project, Alternative 2 would have less than significant impacts related to human remains based on existing regulations. Alternative 2 would avoid rezones in older areas of the City with high concentrations of historic resources, such as portions of Downtown, Hollywood, and San Pedro. As such, although there would still potential for individual development projects to adversely affect historical resources, the potential would be lower than under the proposed Housing Element Update. Potential archaeological resource impacts would be about the same as under the Housing Element Update as those areas cannot be identified similar to the areas with historical resources. All future development projects would continue to be subject to existing federal, state, and local requirements with respect to cultural resources under either Alternative 2 or the Housing Element Update. In addition, **Mitigation Measures 4.4-1(a)** through **4.4-1(j),4.4-2, 4.15-1(a),** and **4.15-1(b)**, which would apply to the proposed Housing Element Update, would also apply to Alternative 2. Overall impacts to historical resources would be lower than those of the proposed Housing Element Update due to the avoidance of areas with high concentrations of historical resources, but impacts to historical resources would remain ***significant and unavoidable***. Impacts to archaeological resources would be the same and would be ***significant and unavoidable.***

Geology and Soils

As discussed in the Initial Study (see Appendix A) to this EIR, all impacts associated with Geology and Soils were scoped out of the EIR with the exception of impacts related to paleontological resources and unique geologic features. In addition, all impacts from the Safety Element associated with geologic conditions and soils were found to be less than significant in the Initial Study.

Similar to the Proposed Project, based on existing regulations on housing development, Alternative 2 would have less than significant impacts to all Geology and Soils criteria except paleontology and unique geological formations. Table 4.5-1 in Section 4.5, *Geology and Soils*, describes the paleontological sensitivity of the geologic units in the City and Figure 4.5-2 shows the paleontological sensitivity throughout the City. Like the proposed Housing Element Update, Alternative 2 would prioritize development on infill sites that have been previously developed and/or disturbed and would be unlikely to affect paleontological resources. Alternative 2 would also avoid rezoning in areas of paleontological sensitivity such as hillside areas and portions of West Los Angeles, South Los Angeles, and San Pedro and would, therefore, have less potential to disturb paleontological resources, however housing development accommodated under Alternative 2 could still occur in those areas to the extent that it is permitted by current zoning. **Mitigation**

Measures 4.5-1(a) through **4.5-1(c)**, which would minimize potential impacts associated with the proposed Housing Element Update, would also apply to this alternative. Therefore, overall impacts to paleontological resources associated with Alternative 2 would be less than those of the Housing Element Update; nevertheless, because disturbance of paleontological resources would remain a possibility, overall impacts would remain ***significant and unavoidable***.

Greenhouse Gas Emissions

As discussed in the Initial Study (see Appendix A), impacts from the Safety Element were found to be less than significant with respect to GHG emissions.

Development accommodated under either Alternative 2 or the proposed Housing Element Update would generate GHG emissions through construction and operation of individual development projects. GHG emissions would specifically arise from direct sources such as motor vehicles, natural gas consumption, solid waste handling/treatment, and indirect sources such as electricity generation. The Proposed Project was consistent with SB 32, the 2017 Scoping Plan and the 2020-2045 RTP/SCS, as well as local plans and ordinances addressing GHGs. Implementation of the proposed Housing Element Update would result in an increase in GHG emissions of 1,089,803 $MTCO_2e$, equating to an emission rate of 0.9 $MTCO_2e$ per service population, which indicates consistency with the State's GHG goals. Because this alternative would accommodate more future housing development in areas more distant from transit routes, overall VMT and associated GHG emissions may be incrementally higher than under the proposed Housing Element Update. Additionally, Alternative 2 would not be as consistent with SCAG's 2020-2045 SCS/RTP goals and policies to put housing near transit. Therefore, impacts would be *significant and unavoidable*.

Hazards and Hazardous Materials

The Initial Study found that impacts associated with the Safety Element would be less than significant in the Initial Study (see Appendix A). It also found that the Housing Element Update would have less than significant impacts related to routine transport, use or disposal of hazardous materials, and hazards related to projects located within two miles of public airport, and interfering with emergency response or evacuation plan, or hazards related to wildland fires (although this impact was scoped back in and addressed in Wildfire impact analysis).

Similar to the Proposed Project, Alternative 2 would have less than significant impacts related to routine transport, use or disposal of hazardous materials, and hazards related to projects located within two miles of public airport, and interfering with emergency response or evacuation plan.

Alternative 2 would involve the same overall amount of development as the proposed Housing Element Update, but would relocate rezone sites outside industrial areas. Consequently, Alternative 2 would have

less potential for upset or accident conditions involving hazardous materials release related to contaminated soils. Nonetheless, housing development accommodated under Alternative 2 would involve the redevelopment, renovation, and demolition of structures built in an era when asbestos, PCBs, and/or lead based paint may have been used construction; thus, renovation or demolition of such structures could result in the release of these substances into the atmosphere. In addition, future development could potentially occur in Methane Zones and Methane Buffer Zones and/or near oil wells. Compliance with the comprehensive and extensive federal, State, and local requirements governing hazardous materials, including those identified in the regulatory compliance measures, would reduce impacts associated with asbestos, PCBs, lead, and methane to a less than significant level. As with the proposed Housing Element Update, however, grading and construction activity could potentially result in the release of soil and/or groundwater contamination, which could adversely affect workers, nearby residents, and schools. **Mitigation Measures 4.7-2(a)** and **4.7-2(b)**, which would apply to the Housing Element Update, would also apply to this alternative. Although the potential for impacts related to hazardous materials would be less than under the Housing Element Update, exposure to hazards could still occur and impacts would remain ***significant and unavoidable***.

Hydrology and Water Quality

The Initial Study (see Appendix A) found less than significant impacts to surface water quality, groundwater levels, groundwater quality or altering the existing drainage pattern in a way to result in erosion, increase flooding, or increase runoff or stormwater.

As with the Proposed Project, housing development accommodated under Alternative 2 would be required to comply with development standards set forth in federal and State construction and design requirements as well as the City's Zoning Code to reduce potential impacts to existing drainage patterns, as well as water quality and ground water levels. Furthermore, all housing development would be required to comply with all other policies and programs outlined in additional regulatory and advisory documents such as the Local Hazard Mitigation Plan and the Floodplain Management Plan, much of which would be integrated into the General Plan through the Safety Element Update. Any project that may impede or redirect flood flows would be subject to review and mitigation similar to that identified for the Project, and would result in less than significant impacts. Therefore, similar to the Proposed Project, Alternative 2 would result in ***less than significant*** impacts with respect to hydrology and water quality.

Land Use and Planning

As discussed in the Initial Study (see Appendix A), the proposed Housing Element Update was found to have no impacts associated with the physical division of an established community; therefore, further

analysis of such impacts was scoped out of this EIR. In addition, all impacts from the Safety Element associated with land use and planning were found to be less than significant in the Initial Study.

Similar to the Proposed Project, the Alternative 2 would have no impact to physically dividing an established community. As with the proposed Housing Element Update, goals, objectives, and policies of under Alternative 2 would generally further citywide housing priorities, including addressing the housing shortage, advancing racial equity and access to opportunity, protecting City residents, and promoting sustainability and resilience through housing. Alternative 2 would meet the requirements of recent changes to state housing law, and would enable to the City to meet its 6th cycle RHNA allocation. As discussed in Section 4.9, *Land Use and Planning*, the proposed Housing Element Update would be consistent with the City's General Plan and strategies in SCAG's 2020-2045 RTP/SCS. As discussed above, this alternative would not be consistent with the goals and strategies in SCAG's 2020-2045 RTP/SCS or in the Framework Element to put housing near transit. Concentration of rezones and new housing in areas such as the San Fernando Valley, West Los Angeles, and South Los Angeles would better meet City policies related to preservation of historical and paleontological resources, but would not meet policies related to concentration of development near transit, reduction in VMT, and reduction of GHG emissions as effectively as would the proposed Housing Element Update. Overall, this alternative's impact would be ***significant and unavoidable*** based on it being inconsistent with the SCS/RTP and Framework Element.

Noise

As discussed in the Initial Study (see Appendix A), noise impacts associated with the Safety Element Update were found to be less than significant.

Construction associated with housing development accommodated under Alternative 2 would be similar to that of the Housing Element Update, though new construction would be more focused in areas such as the San Fernando Valley and portions of West and South Los Angeles. Noise at individual sites could exceed City standards, but construction activity would be required to comply with RCM-NOI-1 through 3 as well as LAMC Section 112.05 and Section 41.40. Nevertheless, as with the Housing Element Update, future larger developments could involve construction with lengthy durations, substantial soil movement, use of large, heavy-duty equipment, and/or pile driving near noise-sensitive land uses that would result in significant impacts that also may not be feasibly mitigated. **Mitigation Measures 4.10-1(a)** through **4.10-1(f)** for the Housing Element Update would apply and would reduce impacts to the degree feasible. Nevertheless, as with the Housing Element Update, impacts would be ***significant and unavoidable***.

With regard to permanent operational noise, individual housing developments under Alternative 2 would include mechanical equipment (i.e., HVAC), delivery and trash trucks, and other noise-generating activities. As with the Housing Element Update, such activities would be typical of the urban environment

and on-site activities would be required to comply with applicable RCMs and LAMC standards. The overall increase in mobile noise would be about the same as under the Housing Element Update, but noise increases would be higher in areas such as the San Fernando Valley and portions of West and South Los Angeles and lower in areas such as Downtown, Hollywood, and San Pedro. As with the Housing Element Update, perceptible 3-dBA increases in noise are not anticipated. **Mitigation Measure 4.10-2** for the Housing Element Update would apply and would reduce impacts to the degree feasible. Nonetheless, because sufficient reduction in operational noise levels cannot be assured for all projects, even with compliance with all City standards, operational noise at various sensitive land uses could result in significant impacts. Therefore, permanent noise increases due to operation of development under Alternative 2 would be similar to those of the proposed Housing Element Update and would be ***significant and unavoidable***.

Housing development under Alternative 2 is not anticipated to involve operational activities that would result in substantial vibration levels (e.g., use of heavy equipment). However, as with the Housing Element Update, construction activities under the No Project Alternative, such as pile driving, could potentially generate vibration exceeding thresholds for buildings susceptible to damage (e.g., historic structures). Again, construction activity and associated impacts would be greater in areas such as the San Fernando Valley and portions of West and South Los Angeles. Mitigation is available (**Mitigation Measures 4.10-3[a]** and **4.10-3[b]**) to reduce the potential effects of vibration and this mitigation would apply to development under this alternative. Overall vibration impacts under Alternative 2 would be similar to those of the Housing Element Update and would be ***significant and unavoidable***.

Housing developments under Alternative 2 could be exposed to intermittent noise levels from overhead flight patterns from several airports in and around the City. Like the Housing Element Update, Alternative 2 would not emphasize building housing in the immediate vicinity of airports; nevertheless, all residential development would be required to incorporate noise insulation features per State and local standards to reduce interior noise levels to below 45 dBA. Similar to the proposed Housing Element Update, Alternative 2 would result in ***less than significant*** impacts associated with airport and airstrip operations.

Population and Housing

Like the proposed Housing Element Update, Alternative 2 would allow the City to meet its current RHNA allocation. It would not, however, accommodate or induce growth beyond that forecast for the City so would not result in environmental impacts related to unplanned population or housing growth. Like the proposed Housing Element Update, this alternative would comply with State law to accommodate the RHNA and would not cause growth or induce growth, but rather, would accommodate the City's

anticipated housing needs. Therefore, similar to the proposed Housing Element Update, impacts associated with Alternative 2 would be less than significant.

Housing development accommodated under Alternative 2 would likely result in some displacement of existing housing units and residents. However, like the proposed Housing Element Update, implementation of this alternative would be expected to result in a net increase in housing in the City. In addition, policies and programs included in the proposed Housing Element Update supporting the provision of affordable housing and displacement prevention would also apply to this alternative. Local policies and regulations would continue to require and/or incentivize future development projects in the City to provide affordable units. As with the Housing Element Update and Safety Element Update, Alternative 2's impact with respect to housing displacement would be ***less than significant***.

Public Services

As discussed in the Initial Study (Appendix A), the Housing Element Update would not affect the need for new or physically altered public libraries and impacts would be less than significant. Therefore, further analysis of impacts related to library facilities were scoped out of this EIR.

Similar to the Proposed Project, Alternative 2 would not result in impacts from public libraries. Like the Proposed Project, Alternative 2 would accommodate increased demand for fire and police protection services in the City. This could result in the need for new or expanded fire and/or police protection facilities or schools, though the increase in demand would be greater in some areas (e.g., San Fernando Valley, portions of West and South Los Angeles) and lower in other areas (e.g., Downtown, Hollywood, San Pedro). The size and location of new facilities is not known at this time. Nevertheless, as with the Proposed Project, impacts would be potentially significant, particularly for larger developments and developments with limited emergency access or already impacted school facilities. **Mitigation Measures 4.12-1(a)** through **4.12-1(d), 4.12-2(a),** and **4.12-2(b)** for the Proposed Project would apply and would reduce demand on services to the degree feasible. Nevertheless, similar to the Proposed Project, overall impacts associated with this alternative would be ***significant and unavoidable.***

Recreation

The updates to the Safety Element would not add population or change the use patterns of the City's parks and recreational facilities. Therefore, the Safety Element Update would not result in any adverse impacts related to recreation, as discussed in the Initial Study (see Appendix A).

Alternative 2 would accommodate the same number of housing units as the proposed Housing Element Update citywide. As with the Housing Element Update, Alternative 2 would accommodate forecasted growth that would increase the use of existing park and recreational facilities. As with the Housing Element

Update, housing development accommodated under Alternative 2 would primarily involve new housing units in urban infill areas of the City, though increases would be greater in some areas (e.g., San Fernando Valley, portions of West and South Los Angeles) and lower in other areas (e.g., Downtown, Hollywood, San Pedro). Space for new parks in these infill areas is limited and existing parks are heavily used. Thus, similar to what would occur under the Housing Element Update, the increase in demand for existing park and recreational facilities and the lack of space to build new parks would accelerate the deterioration of existing parks. To the extent that new parks are constructed they could result in significant impacts from unusual site conditions. As with the Housing Element Update, mitigation for this impact is not available so impacts would be ***significant and unavoidable***.

Transportation

The Safety Element was found in the initial study to have less than significant impacts to all transportation impact criteria.

Impacts from Alternative 2 related to conflicting with a program, plan, ordinance or policy addressing the circulation system, hazardous design or incompatible use, and inadequate emergency access would be similar to the Proposed Project. **Mitigation Measures 4.10-1** and **4.10-2** identified for the Proposed Project would apply to Alternative 2. Therefore, for these impacts, Alternative 2 would have less than significant impacts. Alternative 2, which concentrates more development, may result in greater impacts to freeway congestion and off ramp queuing. Those impacts would be significant and unavoidable.

With respect to transportation, a significant impact would occur if the household and employment VMT per capita were to increase above the projected household and employment VMT per capita under growth projections. Alternative 2 would accommodate the same amount of new housing as the Proposed Project, but would accommodate more development in some areas (e.g., San Fernando Valley, portions of West and South Los Angeles) and less development in other areas (e.g., Downtown, Hollywood, San Pedro). Because housing development potential would generally move from areas with higher levels of transit and a greater mix of jobs and housing to areas with less transit capability and currently higher per capita VMT, Alternative 2 would be expected to generally increase overall and per capita VMT as compared to the Proposed Project.

VMT impacts could potentially be reduced to some degree through the implementation of TDM measures that would be foreseeably imposed on discretionary projects during CEQA review or through the project review. These measures could include the following:

- *Additional bicycle facilities:* In addition to the bicycle lanes in the alternative plans, facilities such as secure bicycle parking (short-term and long-term racks and lockers), showers, and personal locker facilities help reduce peak period and daily automobile trips.
- *Bike share membership:* Discounts on bike share memberships to residents or employees could encourage the use of the local bike share system and bicycle facilities.
- *Discounted transit passes:* Discounts on transit passes to residents or employees in lieu of using a parking space on or near to their destination could incentivize commuters to use transit.
- *Incentives to use alternative modes:* Property owners could use incentives for alternative transportation mode use, such as bicycle purchase, bicycle repair/maintenance, or annual transportation passes.
- *Integrated mobility hubs*: Integrated Mobility Hubs are envisioned as a requisite part of fixed rail transit stations in support of extending the accessibility of those new stations beyond the traditional one-half mile radius that is comfortable for pedestrian access. These hubs implement the concept of "first/last mile" access utilizing the integration of local shuttle buses, shared cars, and shared bicycles as means for extending the utility and patronage of the transit stations.
- *On-site childcare:* On-site childcare could reduce vehicle trips, as children could be taken to an employee's place of work in one trip, instead of necessitating a second trip to the daycare facility.
- *Parking cash out:* In cases where tenants pay for or subsidize parking for employees, a cash out involves the tenant giving employees the option of receiving a payment equal to the cost of a parking space instead of having access to the space.
- *Parking supply/pricing:* Pricing off-street lots at the same rate as on-street meters. This strategy, combined with an app or website with updated pricing information, helps to decrease the number of drivers circling blocks looking for cheaper parking.
- *Shared vehicle services:* Buildings with shared vehicle services, either provided by an outside party or the building management, would encourage residents or employees to take other modes the majority of the time, as they could use a shared vehicle when necessary.
- *Shuttle or vanpool:* Depending on the density of users on a particular route, shuttles or vanpools could help reduce trips in providing a carpooling service. Regular service for free or very minimal cost would be the most enticing to users.
- *Telecommuting:* Telecommuting provides an alternative to home-to-work trips. The City could encourage incorporation of new technologies supporting telecommuting into new office and residential developments.

- *Unbundle parking:* By selling or leasing parking separately from the lease or purchase price, tenants can purchase or rent a parking space for an additional cost. This disincentivizes tenants from having a parking space, and helps to promote alternative modes.

However, at this time it is not possible to estimate the effectiveness of these TDM strategies. Therefore, potential VMT impacts under Alternative 2 would be greater than those of the Proposed Project and would be ***significant and unavoidable***.

Tribal Cultural Resources

Impacts from the Safety Element Update to tribal cultural resources were found to be less than significant in the Initial Study (see Appendix A).

As described in Section 4.4, Los Angeles has a long history of Native American habitation and any development activities that include ground disturbance have the potential to significantly impact tribal cultural resources. Effects on tribal cultural resources are only known once a specific development has been proposed because the effects are highly dependent on both the individual development site conditions and the characteristics of the proposed activity. Development accommodated by Alternative 2 may disturb areas that potentially contain tribal resources. Similar to the proposed Housing Element Update, all future development projects would continue to be subject to existing federal, State, and local requirements and discretionary projects may be subject to project-specific mitigation requirements under CEQA and the requirements of AB 52, which include consultation with California Native American tribes. As with the proposed Housing Element Update, impacts under Alternative 2 would be potentially significant. **Mitigation Measures 4.4-2, 4.15-1(a),** and **4.15-1(b)** for the Housing Element Update would apply and would reduce impacts to the degree feasible. Nevertheless, as with the Housing Element Update, impacts would be ***significant and unavoidable***.

Utilities and Service Systems

As discussed in the Initial Study (see Appendix A), implementation of the Housing Element Update would result in less than significant impacts related to solid waste generation and compliance with federal, State, and local statues related to solid waste. Also, impacts to utilities and service systems from the Safety Element were found to be less than significant in the Initial Study.

Similar to the Proposed Project, Alternative 2 would have less than significant impacts to solid waste and compliance with laws related to solid waste based on the City's practices and available land fill capacity.

As with the proposed Housing Element Update, housing development under Alternative 2 may require minor upgrades for the conveyance of wastewater. However, the environmental impacts associated with

the construction or relocation of potentially required new or expanded wastewater infrastructure would be temporary and less than significant. Existing wastewater treatment plants serving the City have adequate capacity to treat wastewater generated by either this alternative or the proposed Housing Element Update. Therefore, impacts related to wastewater facilities would be ***less than significant.***

As with the proposed Housing Element Update, residential developments accommodated under Alternative 2 would adhere to citywide regulations, such as the Low Impact Development and Model Water Efficient Landscape Ordinance to reduce stormwater run-off. As with the Housing Element Update, Alternative 2 is not anticipated to require or result in the relocation or construction of new or expanded stormwater conveyance systems that would cause significant environmental impacts; therefore, impacts would be similar to those of the proposed Housing Element Update and would be ***less than significant***.

Development accommodated under Alternative 2, similar to the proposed Housing Element Update, would increase demand for water; however, as with the Housing Element Update, the City would have sufficient supplies to meet the demands of new development so impacts to water supply would be less than significant. Like the Housing Element Update, development under Alternative 2 may require minor new or expanded water line upgrades to serve residential developments. However, the environmental impacts associated with the construction or relocation of potentially required new or expanded water facilities would be temporary and less than significant. LADWP plans to replace approximately 500 miles in the next 10 years giving the highest priority to pipes with high risk of failure. Such upgrades would likely occur within existing utility easements and would not result in new areas of disturbance. However, prior to ground disturbance, a project contractor would have to coordinate with LADWP to identify the locations and depth of all lines. Furthermore, implementation of RCM-UTIL-1 would require a system analysis for individual projects to determine whether existing LADWP water supply facilities can provide the proposed fire flow requirements. Similar to the proposed Housing Element Update, impacts related to water supply and distribution facilities would be ***less than significant*** under Alternative 2.

Wildfire

Impacts from the Safety Element Update related to Wildfire were found to be less than significant in the Initial Study (see Appendix A).

Like the proposed Housing Element Update, Alternative 2 would generally direct development away from areas of the City designated as Very High Fire Hazard Severity Zones (VHFHSZs). Nevertheless, some areas designated as VHFHSZs are zoned for residential use and could accommodate future development under this alternative. Development in such areas would have the potential to impair implementation of an adopted emergency response plan or emergency evacuation plan due to the temporary obstruction of roads associated with construction activities on or near a designated emergency route, expose project

occupants to pollutant concentrations from wildfire, require installation of infrastructure that may exacerbate fire risk, and expose people and structures to significant risks as a result of post fire conditions. Because rezones under the Housing Element Update would not be in areas subject to wildfire hazards, the potential for such impacts would be the same under Alternative 2 and the Housing Element Update. **Mitigation Measure 4.17-1** for the Housing Element Update would apply to this alternative and would reduce the potential for obstruction of roadways by regulating construction-related staging and parking for projects in hillside areas, as well as other wildfire risks. Nevertheless, similar to the Housing Element Update, impacts under Alternative 2 would be ***significant and unavoidable***.

c. Conclusion

The Redistribution of Rezoning Program Alternative would accommodate the same amount of housing development as the Proposed Project, but growth would be greater in some areas (e.g., San Fernando Valley, portions of West and South Los Angeles) and lower in other areas (e.g., Downtown, Hollywood, San Pedro). This would reduce the potential for impacts in some issue areas (notably, historical resources, paleontological resources, and hazardous materials) and increase impacts related to other issue areas (notably, transportation, air quality, land use, and greenhouse gases). As with the Proposed Project, unavoidable significant impacts under Alternative 2 would still occur with respect to air quality, biological resources, cultural resources, geology and soils (specifically paleontological resources), construction noise and vibration, recreation, hazards, public services, tribal cultural resources, and wildfire. This alternative would also have a significant and unavoidable impact related to transportation (VMT), GHG, and land use (inconsistency with SCS/RTP and Framework Element).

6.5.3 Environmentally Superior Alternative

CEQA requires identification of the environmentally superior alternative among the options studied. For this analysis, an impact associated with an alternative would be considered greater than or less than that of the Proposed Project if the alternative results in a different impact conclusion as compared to the Proposed Project (e.g., if the Proposed Project would have a significant impact for a particular issue and the alternative would avoid that significant impact, the alternative would have a lower impact), or if the alternative results in an impact that is incrementally greater or less than the Proposed Project. For impacts where the alternative would have similar impacts to the Proposed Project, the impact is classified as similar.

Either of the studied alternatives would incrementally increase impacts related to some issue areas and incrementally reduce impacts related to other issue areas. However, as shown in Table 6-1, neither of the studied alternatives would avoid any of the significant and unavoidable impacts of the Proposed Project and both would also result in significant and unavoidable impacts (i.e., transportation, land use, air quality,

and GHG) that would not occur under the Proposed Project. Therefore, the Proposed Project is the Environmentally Superior Alternative.

Table 6-1 Impact Comparison of Alternatives

Issue	Proposed Project	Alternative 1: No Project	Alternative 2: Redistribution of Rezoning Program
Aesthetics	LS	+ (LS)	=
Air Quality	SU	+ (SU)	- (SU)
Biological Resources	SU	- (SU)	=
Cultural Resources	SU	+ (SU)	+ (SU)
Geology and Soils	SU	+ (SU)	+ (SU)
Greenhouse Gas Emissions	LS	- (SU)	- (SU)
Hazards and Hazardous Material	SU	+ (SU)	+ (SU)
Hydrology and Water Quality	LTSM	=	=
Land Use and Planning	LS	- (SU)	- (SU)
Noise	SU	+ (SU)	=
Population and Housing	LS	- (LS)	=
Public Services	SU	=	=
Recreation	SU	=	=
Transportation	SU	- (SU)	- (SU)
Tribal Cultural Resources	SU	+ (SU)	=
Utilities	LS	=	=
Wildfire	SU	- (SU)	=

LS: less than significant impact
LTSM: less than significant impact with mitigation incorporated
SU: significant and unavoidable
=: Similar level of impact to the proposed project
+: Superior to the proposed project (reduced level of impact)
-: Inferior to the proposed project (increased level of impact)

6.6 ALTERNATIVES CONSIDERED BUT REJECTED

Section 15126.6(c) of the *CEQA Guidelines* requires that an EIR identify those alternatives that were considered but rejected by the lead agency because they either did not meet the objectives of the project, were considered infeasible, or would not avoid or substantially lessen one or more significant effects of the Proposed Project. Alternatives that were considered, but rejected include the following:

- Reduction of housing units to a level that would avoid all significant impacts: This alternative was rejected because it would not meet the RHNA allocation and therefore would not be compliant with the requirements under State Housing Element law.
- Moving housing to areas where the construction of parks/recreational facilities is more feasible: This alternative was rejected because there are no areas of open space that would reduce the recreation impact to a less than significant level. Additionally, placement of housing units in areas with more space for parks would be expected to increase impacts associated with other issues, such as air quality, biological resources, GHG emission, and transportation.

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