



GENERAL PLAN UPDATE

Draft Environmental Impact Report

Public Review Draft
September 2022
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EXECUTIVE SUMMARY

As the lead agency, the City of Carson (City) has prepared this Draft Environmental Impact Report (EIR) to provide information about the potential environmental impacts associated with the Carson 2040 General Plan Update (Project). This Draft EIR has been prepared in compliance with the California Environmental Quality Act (CEQA) of 1970 (as amended), codified at California Public Resources Code (PRC) Sections 21000 et. seq., and the State CEQA Guidelines in the Code of Regulations, Title 14, Division 6, Chapter 3. A program-level analysis of the environmental impacts associated with the policies and the projected build out of the Project is included in this Draft EIR. The analysis is consistent with State CEQA Guidelines Section 15168. The State Clearinghouse Number is 2001091120.

This chapter of the Draft EIR is prepared pursuant to State CEQA Guidelines Section 15123, which requires that an EIR include a brief summary of the Draft EIR. Per Section 15123, the summary shall contain a brief description of the Project's proposed actions and consequences, including identification of each significant effect and proposed mitigation measures and alternatives that would reduce or avoid those effects, a description of the areas of controversy known to the lead agency, and identification of issues to be resolved including the choice among alternatives and whether or how to mitigate the significant effects.

Project Location

The city of Carson is located in the South Bay region of southern Los Angeles County. The city is about 13 miles south of downtown Los Angeles. Interstate 405 (I-405) runs through Carson, and Interstate 110 (I-110) and Interstate (I-710) are located just outside the city boundaries, connecting Carson to other communities throughout the region.

The General Plan Planning Area includes the city of Carson and its unincorporated sphere of influence (SOI). The Planning Area is bounded by East Alondra Boulevard and the city of Compton to the north, the city of Long Beach on the east, the Los Angeles neighborhood of Wilmington on the south, and I-110 and South Figueroa Street on the west. The SOI includes a portion of unincorporated Los Angeles County, located in the northeast section of the Planning Area north of Del Amo Boulevard and east of Wilmington Avenue.

Proposed Project

The Project includes a comprehensive update of all elements of the Carson General Plan, with the exception of the Housing Element, which was recently adopted in February 2022. The General Plan would guide future land use decisions in Carson, providing a long-term vision for the city

and, through its policies, would indicate how that vision would be achieved. The Project would be the primary policy document guiding growth and development within the Planning Area through the planning horizon year of 2040. Together with the Zoning Ordinance and related sections of the Carson Municipal Code, the Project would serve as the basis for planning-related decisions made by City staff, the Planning Commission, and the City Council.

By law, a general plan must be an integrated, internally consistent statement of City policies. Government Code Section 65302 requires that a general plan include the following seven elements: Land Use, Circulation, Housing, Conservation, Open Space, Noise, and Safety. According to Senate Bill (SB) 1000 and Gov. Code, Section 65302, since disadvantaged communities have been identified within Carson, the proposed General Plan update must also address Environmental Justice either as a standalone element or integrating related goals, policies, and objectives throughout other elements. This is included in the General Plan as a standalone element. Additional elements may be included as well, at the discretion of the City.

Project Objectives

The Project will establish the course for the next two decades for the city to foster a vibrant and sustainable community, respond to an increasingly diverse and aging population, and addresses the myriad of physical, environmental, and other challenges that the city faces. The policies addressed in the proposed General Plan update are intended to respond to these challenges. At the outset of the General Plan update process, the following specific objectives were established for the Project:

- Work with the community to articulate a vision for the city, and translating this vision into a viable implementation program
- Ensure balanced land use development that benefits residents and businesses
- Foster transportation improvements that allow people to easily and safely get around the city by driving, walking, biking, and/or taking transit
- Enhance quality of life and community character
- Improve the City's fiscal and economic health
- Revitalize the community for a diverse, aging, and changing population
- Coordinate with regional planning initiatives and state mandates regarding sustainability, greenhouse gas emissions, and environmental justice
- Establish a long-range vision that reflects the aspirations of the community and outlines steps to achieve this vision
- Establish long-range development policies that will guide City departments, as well as Planning Commission, City Council, and City department decision making
- Provide a basis for judging whether specific development proposals and public projects are in harmony with plan policies
- Plan in a manner that meets future needs based on the projected population and job growth

- Allow City departments, other public agencies, and private developers to design projects that will preserve and enhance community character and environmental resources, and minimize hazards
- Provide the basis for establishing and setting priorities for detailed plans and implementing programs, such as the zoning ordinance, subdivision regulations, specific and master plans, the Capital Improvement Program, the Housing Element, and the Local Hazard Mitigation Plan
- Reduce community-wide GHG emissions consistent with statewide targets

Public Review Process

In compliance with the State CEQA Guidelines, the City provided opportunities to the public to participate in the environmental process. During preparation of the Draft EIR, various state, regional and local government agencies and other interested parties were notified to solicit comments on the scope of the EIR and to inform the public of the Project.

Specifically, pursuant to the provision of Section 15082 of the State CEQA Guidelines, the City circulated a Notice of Preparation (NOP) to state, regional, and local agencies, and members of the public for a 30-day period commencing November 8, 2017, and ending December 15, 2017. The City conducted a scoping meeting on December 7, 2017, at 4:00 p.m. in the Juanita Millender-McDonald Community Center, located at 801 East Carson Street, Carson, California. However, after the initiation of the environmental review process, the City put the Project on hold in 2018.

Although a NOP was distributed in 2017, in light of the passage of time and the revisions to the Project, the City issued a Recirculated NOP to state, regional, and local agencies, and members of the public for a 30-day period commencing March 22, 2021, and ending April 21, 2021. The purpose of the NOP was to formally convey that the City was preparing a Draft EIR for the Project, to present the environmental topics preliminarily identified by the City for evaluation in the Draft EIR, and to solicit input regarding the scope and content of the information to be included in the Draft EIR. The Recirculated NOP included notification that a public scoping meeting would be held to further inform public agencies and other interested parties of the Project and to solicit input regarding the Draft EIR. The City posted the Recirculated NOP on the City Planning website along with information regarding the process for providing comments. The second scoping meeting for the Recirculated NOP was a webinar held virtually over Zoom on April 14, 2021, at 6:30 p.m.

The City received four written comment letters responding to the NOP and nine written comment letters responding to the Recirculated NOP. The NOP and Recirculated NOP and comments received during the scoping process are included in Appendix A of this EIR.

Areas of Controversy/Issues to Be Resolved

Section 15123 of the State CEQA Guidelines states that an EIR shall identify areas of controversy known to the lead agency, including issues raised by the agency and the public during the scoping

process. The largest environmental issues raised by the community during the public outreach process for the proposed General Plan update stem from the existing heavy-industrial uses in Carson and adjacent residential areas. The issues listed below have been identified for the Project and may be controversial:

- Air quality, water quality, fireballs and refinery explosions, and emergency response to these hazards;
- Truck and vehicle traffic, citywide but particularly along major corridors.

In addition, the lead agency received comment letters from public agencies during the 30-day public review period in response to the Recirculated NOP. In general, the comment letters recommended that the proposed General Plan update take into consideration potential impacts to the following environmental resources: traffic and transportation planning; the Dominguez Gap Wetlands and other sensitive biological resources; cultural and tribal cultural resources; air quality and greenhouse gas emissions; public and worker safety; and fire prevention. Also included in the comment letters were recommendations for consultation with the agencies and mitigation measures in the event that the Project would result in substantial environmental impacts.

Significant and Unavoidable Environmental Impacts

State CEQA Guidelines Section 15126 requires that an EIR describe any significant impacts that cannot be avoided, even with implementation of feasible mitigation measures. As indicated in Chapter 3, *Environmental Setting, Impacts, and Mitigation Measures*, of this Draft EIR, the Project would result in significant unavoidable impacts associated with air quality, historical resources, and transportation. The significant and unavoidable impacts are listed below and summarized in Chapter 5, *Other CEQA Considerations*.

- | | |
|---------------------|--|
| Impact AQ-2 | The Project would 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 AQ-3 | The Project would expose sensitive receptors to substantial pollutant concentrations. |
| Impact AQ-4 | The Project would result in other emissions (such as those leading to odors) affecting a substantial number of people. |
| Impact CUL-1 | The Project would cause a substantial adverse change in the significance of a historical resource pursuant to Section 15064.5. |
| Impact TR-2 | The Project would conflict or be inconsistent with CEQA Guidelines Section 15064.3, Subdivision (b). |

Alternatives to Reduce Potential Impacts

The State CEQA Guidelines require an analysis of alternatives to proposed projects. According to State CEQA Guidelines Section 15126.6 (a), the purpose of analyzing project alternatives is to

identify alternatives that “...would avoid or substantially lessen any of the significant effects of the project.” According to Section 15126.6(e), an EIR alternatives analysis should include the analysis of a No Project Alternative to allow decision makers to compare the impacts of approving a proposed project with the impacts and foreseeable future of not approving that project.

Alternatives Considered and Rejected from Further Consideration

The State CEQA Guidelines Section 15126.6(c) recommends that an EIR identify alternatives that were considered for analysis but rejected as infeasible and briefly explain the reasons for their rejection. According to the State CEQA Guidelines, the following factors may be used to eliminate alternatives from detailed consideration: the alternative’s failure to meet most of the basic project objectives, the alternative’s infeasibility, or the alternative’s inability to avoid significant environmental impacts.

The following is a discussion of the land use alternatives considered during the scoping and planning process and the reasons why they were not selected for detailed analysis in this Draft EIR. Three alternatives (Core, Centers, and Corridors) were developed during the third phase of the General Plan planning process and input on these was collected from community members through an online survey, community workshops, decision-maker meetings, and General Plan Advisory Committee (GPAC) meetings. The Core and Centers alternatives were ultimately rejected from further consideration.

Rejected Alternative: Core

The Core Alternative seeks to concentrate new development in a central area in the city, expanding on the energy and success of recent development along Carson Street. New development would be concentrated in approximately a 1.5-mile radius from Carson Street and Avalon Boulevard, resulting in a vibrant, connected core area with a diverse mix of uses. Streetscape, pedestrian, and bicycle-way improvements would be focused in this core area to promote active, walkable environments, with easy access to stores, services, parks, and other public uses. Additional development would occur in select focus areas outside of this core.

The mixed-use pattern of new development along Carson Street is envisioned to expand along the portion of the corridor between I-110 and Wilmington Avenue. A density increase overlay would be located on the blocks north and south of Carson Street to provide additional housing that would reflect a density more similar to a “downtown.” Avalon Boulevard would connect the inner core area to key large-scale development opportunities along I-405, including the 157-acre opportunity site where The District at South Bay project is proposed, as well as the South Bay Pavilion Mall.

Victoria Golf Course would be redeveloped as an “innovation center” that would provide contemporary office buildings and workplaces, with higher density development than found elsewhere in Carson. This area would be designed from the ground up to accommodate a variety of businesses—including, for example, financial and technology offices—in an integrated, walkable setting, connected with the other parts of the community by a “green spine” along the

Dominguez Channel. As this area was formerly used as a landfill, higher development intensities, including buildings ranging from six to 12 stories tall, may have been necessary to justify remediation or working within the environmental constraints.

The Core Alternative would include a large, central city park with portions of research and development (R&D) uses on the Shell site. The area north of I-405, between Dominguez Channel and SR-91, would be a transitional area between the core and industrial uses near the city's northern border. This transition zone would create a buffer between residential and industrial uses, providing live-work units, light industrial and manufacturing uses (e.g., breweries or coffee roasteries), R&D office parks, and neighborhood commercial uses in close proximity to California State University, Dominguez Hills. Overall, the Core Alternative emphasizes Carson Street and Avalon Boulevard, including potential redevelopment of City Hall, as connectors to new regional centers.

The Core Alternative was not considered for further analysis since it would not meet the basic project objectives of revitalizing other portions of the city, including underutilized commercial properties along the corridors and locating additional services near existing residential areas. This alternative envisions the Victoria Golf Course as an "innovation center" with office building six to twelve stories tall. Development of the Victoria Golf Course at the scale envisioned was found to be infeasible due to the hazardous conditions of the closed landfill. In addition, Los Angeles County owns and maintains the course and is proposing redevelopment of the site as The Creek at Dominguez Hills, a recreation complex that would include a multi-use indoor sports complex, youth learning experience facility, indoor skydiving facility, marketplace, clubhouse, recreation and dining center, restaurant uses, and a sports wellness center. The Core Alternative was also not considered further since new development to be built on the Core was incorporated into the Project.

Rejected Alternative: Centers

The Centers Alternative focuses on nodal development throughout the city. Each node or center would contain a different mix of uses, depending on location and available opportunity sites, with each node containing various housing, employment, and commercial uses in a walkable, higher-density pattern. These centers would not only accommodate new projected growth in the community, but would also act as focus areas for the surrounding neighborhoods, providing stores and services to existing neighborhoods that lack such uses and an improved pedestrian-scaled public realm with cafés, restaurants, and public gathering places. The radius around each node would be approximately one-half mile, or a ten-minute walking distance, in order to keep development walkable.

Carson Street redevelopment was envisioned to expand, though concentrated around the intersections of Carson and Main streets, along Carson Street and Avalon Boulevard, and at densities somewhat lower than envisioned in the Core Alternative. Additional centers would occur in the vicinity of Main Street and Del Amo Boulevard, which complements development of The District at South Bay and would take advantage of proximity to major highways. The South Bay Pavilion would be another center, which would provide retail and visitor commercial (i.e., hotels, entertainment) uses close to the major thoroughfares and transitions into mixed-use, office, and industrial flex uses further from the highway. In another center, industrial flex and

intensification of underutilized industrial parcels would create an employment-centered mixed-use area in proximity to the Del Amo Blue Line Station. Other centers would provide more housing and commercial near California State University, Dominguez Hills, and in the southern portion of the city around Main Street and Sepulveda Boulevard.

The centers would be connected via arterial streets redeveloped as greenways that would improve mobility and provide a consistent, welcoming image for the city of Carson. Additional density would occur in the city's industrial areas. While some of the opportunity sites identified in this alternative were similar to the Core Alternative, they were proposed at different densities and with different uses.

The Centers Alternative focused on development of central "nodes", which contains various housing, employment, and commercial uses in a walkable, higher-density pattern, to help enliven certain portions of the city. While this planning intention is good in theory, this alternative was not considered for further analysis since the sites that were chosen for land use changes were ultimately determined to be infeasible due to existing land use limitations and the City's desire to retain some of these areas as industrial. Furthermore, this alternative largely focused development only within these certain nodes and does not meet the basic project objective of revitalizing other portions of the city, particularly along major corridors and other key opportunity sites. The Centers Alternative was also not considered further since the Project incorporates a similar concept, called Neighborhood Villages, which seeks to achieve the same planning outcome of walkable, mix-use centers throughout the city.

Alternatives Selected for Analysis

The following alternatives were selected for analysis. Their associated environmental impacts are discussed further in Chapter 4, *Alternatives*.

Alternative 1 – No Project

Consistent with Section 15126.6(e)(2) of the State CEQA Guidelines, the No Project Alternative represents what would be reasonably expected to occur in the foreseeable future if the Project were not adopted and the City's current General Plan was left unchanged. This alternative would retain all current land use designations and definitions from the current General Plan as amended to date, and future development in the Planning Area would continue to be subject to existing policies, regulations, development standards, and land use designations of the existing Carson General Plan. Specifically, the area around the Core would not be designated as Downtown Mixed Use nor would the corridors have the Corridor Mixed Use designation, both of which allows for greater development within these areas. Further, there would be no new Flex District or Business Residential Mixed Use land use designations which allow for a greater variety and intensity of uses.

All change areas as identified in the Project would retain their existing 2004 General Plan designations. Policies concerning topics such as transportation, economic development, parks, open space, the environment, climate change, environmental justice, health, and housing would also remain unchanged.

Overall, the No Project Alternative is projected to result in approximately 18,953 more residents, 5,223 new housing units, and 18,140 new jobs in Carson by 2040.

Alternative 2 – Corridors

The Corridors Alternative clusters new development around major thoroughfares throughout the city, with an increased focus on corridors with the greatest development opportunities. The overall scale and density of development would vary somewhat throughout the city; however, overall, the density of development would be lower than in the Core or Centers Alternatives and would be more evenly spread throughout the city. Generally, mixed-use development would occur along major streets, with supporting retail, housing, office, and employment uses around the periphery of the mixed-use areas. Main Street, Figueroa Street, and Broadway would be revitalized from nearly the southern border to the northern border of Carson. The Carson Street redevelopment would be extended from the city's western border to Wilmington Avenue, with some additional commercial redevelopment envisioned along Carson Street in the Lincoln Village neighborhood. Additional development would occur along Alameda Street, Sepulveda Boulevard, Del Amo Boulevard, and Avalon Boulevard.

While this alternative concentrates on development along major corridors, other large sites throughout the city would support surrounding neighborhoods. The Shell site would be redeveloped as a new, state-of-the-art R&D campus, bringing more jobs to Carson. A new street grid and linear park in this area would foster connectivity to industrial flex across the street along Del Amo Boulevard and adjacent existing single-family neighborhoods. R&D and industrial flex uses would be increased along Broadway in the northern portion of the city and SOI. This higher-density, old industrial buildings currently located in this area and provide a more prominent gateway to the city. Both of these R&D areas are in close proximity to California State University, Dominguez Hills, and could help to provide jobs for students. In this alternative, the Victoria Golf Course would be redeveloped as a recreational/open space area and South Bay Pavilion would provide a location for additional housing.

Overall, the Corridors Alternative is projected to result in approximately 34,106 more residents, 9,880 new housing units, and 19,222 new jobs in Carson by 2040.

Summary of Environmental Impacts

Pursuant to Section 15123(b)(1) of the State CEQA Guidelines, **Table ES-1, *Summary of Project Impacts, General Plan Policies, and Mitigation Measures***, contains a summary of environmental impacts associated with the Project, the applicable General Plan policies, and mitigation measures, that would reduce or eliminate the impacts, and the level of significance of the impacts following the implementation of these General Plan policies, and mitigation measures.

**TABLE ES-1
SUMMARY OF PROJECT IMPACTS, GENERAL PLAN POLICIES, AND MITIGATION MEASURES**

Impact	Significance Before Implementation of GP Policies and Mitigation Measures	General Plan Policies	Mitigation Measures	Significance After Implementation of GP Policies and Mitigation Measures
KEY: NI = No Impact LTS = Less than Significant PS = Potentially Significant SU – Significant and Unavoidable				
Aesthetics				
AES-1: The Project would not have a substantial adverse effect on a scenic vista.	LTS	LUR-G-5, LUR-G-7, OSEC-G-1, OSEC-G-2, OSEC-G-3 OSEC-G-4, OSEC-G-5, LUR-P-18, LUR-P-20, LUR-P-22, CCD-P-8, CCD-P-21, CCD-P-29, OSEC-P-4, OSEC-P-5, OSEC-P-6, OSEC-P-7.	None.	LTS
AES-2: The Project would not substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a State Scenic highway.	NI	LUR-G-5, LUR-G-7, OSEC-G-1, OSEC-G-2, OSEC-G-3 OSEC-G-4, OSEC-G-5, LUR-P-18, LUR-P-20, LUR-P-22, CCD-P-21, CCD-28, OSEC-P-4, OSEC-P-5, OSEC-P-6, OSEC-P-7.	None.	NI
AES-3: The Project would not result in development that would conflict with applicable zoning and other regulations governing scenic quality.	LTS	LUR-G-5, LUR-G-7, OSEC-G-1, OSEC-G-2, OSEC-G-3 OSEC-G-4, OSEC-G-5, LUR-P-18, LUR-P-20, LUR-P-22, CCD-P-21, CCD-P-28, OSEC-P-4, OSEC-P-5, OSEC-P-6, OSEC-P-7.	None.	LTS
AES-4: The Project would not create a new source of substantial light or glare that would adversely affect day or nighttime views in the area.	LTS	LUR-P-22.	None.	LTS
Air Quality				
AQ-1: The Project would not conflict with or obstruct implementation of the applicable air quality plan.	LTS	LUR-G-2, LUR-G-4, LUR-G-6, LUR-G-7, LUR-G-9, LUR-G-11, CIR-G-1, CIR-G-2, CIR-G-3, CIR-G-4, CHE-G-2, CHE-G-3, CHE-G-8, OSEC-G-17, OSEC-G-18, OSEC-G-19, OSEC-G-20, OSEC-G-21, SEC-G-22, LUR-P-1, LUR-P-8, LUR-P-11, LUR-P-12, LUR-P-13, LUR-P-16, LUR-P-18, LUR-P-24, CIR-P-1, CIR-P-2, CIR-P-3, CIR-P-4, CIR-P-16, CIR-P-17, CIR-P-19, CIR-P-20, CIR-P-21, CIR-P-22, CIR-P-23, CIR-P-24, CIR-P-25, CIR-P-26, CIR-P-27, CIR-P-32, CIR-P-33, CIR-P-34, CHE-P-5, CHE-P-6, OSEC-P-33, OSEC-P-34, OSEC-P-35, OSEC-P-36, OSEC-P-43, OSEC-P-46, OSEC-P-47, OSEC-P-48, OSEC-P-49.	None.	LTS

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AQ-2: The Project would 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.	PS	LUR-G-2, LUR-G-4, LUR-G-6, LUR-G-7, LUR-G-9, LUR-G-11, CIR-G-1, CIR-G-2, CIR-G-3, CIR-G-4, CHE-G-2, CHE-G-3, CHE-G-8, OSEC-G-17, OSEC-G-18, OSEC-G-19, OSEC-G-20, OSEC-G-21, SEC-G-22, LUR-P-1, LUR-P-8, LUR-P-11, LUR-P-12, LUR-P-13, LUR-P-16, LUR-P-18, LUR-P-24, CIR-P-1, CIR-P-2, CIR-P-3, CIR-P-4, CIR-P-16, CIR-P-17, CIR-P-19, CIR-P-20, CIR-P-21, CIR-P-22, CIR-P-23, CIR-P-24, CIR-P-25, CIR-P-26, CIR-P-27, CIR-P-32, CIR-P-33, CIR-P-34, CHE-P-5, CHE-P-6, OSEC-P-33, OSEC-P-34, OSEC-P-35, OSEC-P-36, OSEC-P-43, OSEC-P-46, OSEC-P-47, OSEC-P-48, OSEC-P-49.	MM AQ-1, MM AQ-2, MM AQ-3, MM AQ-4, MM AQ-5.	SU
AQ-3: The Project would expose sensitive receptors to substantial pollutant concentrations.	PS	LUR-G-5, LUR-G-10, LUR-G-13, LUR-G-14, CIR-G-2, CIR-G-3, CIR-G-4, CHE-G-2, OSEC-G-17, OSEC-G-18, OSEC-G-20, OSEC-G-21, GHE-G-4, LUR-P-17, LUR-P-19, LUR-P-22, CIR-P-1, CIR-P-2, CIR-P-3, CIR-P-4, CIR-P-21, CIR-P-22, CIR-P-23, CIR-P-24, CIR-P-25, CIR-P-32, CIR-P-33, CHE-P-5, OSEC-P-33, OSEC-P-36, OSEC-P-43, OSEC-P-47, OSEC-P-48, OSEC-P-49, CHE-P-4, CHE-P-8.	MM AQ-6, MM AQ-7.	SU
AQ-4: The Project would result in other emissions (such as those leading to odors) affecting a substantial number of people.	PS	LUR-G-2, LUR-G-4, LUR-G-6, LUR-G-7, LUR-G-9, LUR-G-11, CIR-G-1, CIR-G-2, CIR-G-3, CIR-G-4, CHE-G-8, OSEC-G-17, OSEC-G-18, OSEC-G-19, OSEC-G-20, OSEC-G-21, OSEC-G-22, LUR-P-1, LUR-P-8, LUR-P-11, LUR-P-12, LUR-P-13, LUR-P-16, LUR-P-18, LUR-P-24, CIR-P-1, CIR-P-2, CIR-P-3, CIR-P-4, CIR-P-16, CIR-P-17, CIR-P-19, CIR-P-20, CIR-P-21, CIR-P-22, CIR-P-23, CIR-P-24, CIR-P-25, CIR-P-26, CIR-P-27, CIR-P-32, CIR-P-33, CIR-P-34, CHE-P-5, OSEC-P-33, OSEC-P-34, OSEC-P-35, OSEC-P-36, OSEC-P-43, OSEC-P-46, OSEC-P-47, OSEC-P-48, OSEC-P-49.	MM AQ-1, MM AQ-2, MM AQ-3, MM AQ-4, MM AQ-5, MM AQ-6.	SU
Biological Resources				
BIO-1: The Project would not have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by the CDFW or USFWS.	PS	OSEC-G-3, OSEC-G-4, OSEC-G-5, OSEC-P-4, OSEC-P-5, OSEC-P-6, OSEC-P-7.	MM BIO-1, MM BIO-2, MM BIO-3, MM BIO-4, MM BIO-5, MM BIO-6, MM BIO-7, MM BIO-8, MM BIO-9.	LTS

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BIO-2: The Project would not have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, or regulations or by the CDFW or USFWS.	PS	OSEC-G-3, OSEC-G-4, OSEC-G-5, OSEC-P-4, OSEC-P-5, OSEC-P-6, OSEC-P-7.	MM BIO-10, MM BIO-11.	LTS
BIO-3: The Project would not have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marsh, vernal pools, coastal saltmarsh, etc.) through direct removal, filling, hydrological interruption, or other means.	NI	None.	None.	NI
BIO-4: The Project would not 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	PS	OSEC-G-4.	MM BIO-5, MM BIO-10, MM BIO-11.	LTS
BIO-5: The Project would not conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance.	NI	OSEC-G-5, OSEC-P-5, OSEC-P-6.	None.	NI
BIO-6: The Project would not conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan.	NI	OSEC-G-3, OSEC-G-4, OSEC-G-5, OSEC-P-4, OSEC-P-5, OSEC-P-6, OSEC-P-7.	None.	NI
Cultural Resources				
CUL-1: The Project would cause a substantial adverse change in the significance of a historical resource pursuant to Section 15064.5.	PS	OSEC-G-6, OSEC-G-7, OSEC-P-8, OSEC-P-9, OSEC-P-10.	MM CUL-1.	SU
CUL-2: The Project would not cause a substantial adverse change in the significance of an archaeological resource pursuant to Section 15064.5.	PS	OSEC-G-6, OSEC-P-8, OSEC-P-9, OSEC-P-10.	MM CUL-2.	LTS
CUL-3: The Project would not disturb any human remains, including those interred outside of formal cemeteries.	LTS	OSEC-G-6, OSEC-P-8.	None.	LTS

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Energy				
ENG-1: The Project would not result in a potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation.	LTS	LUR-G-2, LUR-G-4, LUR-G-6, LUR-G-7, LUR-G-9, LUR-G-11, CIR-G-1, CIR-G-2, CIR-G-3, CIR-G-4, CHE-G-8, OSEC-G-14, OSEC-G-15, OSEC-G-25, LUR-P-1, LUR-P-8, LUR-P-11, LUR-P-12, LUR-P-13, LUR-P-16, LUR-P-18, LUR-P-24, CIR-P-1, CIR-P-2, CIR-P-3, CIR-P-4, CIR-P-16, CIR-P-17, CIR-P-19, CIR-P-20, CIR-P-21, CIR-P-22, CIR-P-23, CIR-P-24, CIR-P-25, CIR-P-26, CIR-P-27, CIR-P-32, CIR-P-33, CIR-P-34, CHE-P-5, OSEC-P-29, OSEC-P-41, OSEC-P-51, OSEC-P-57, OSEC-P-58, and OSEC-P-59.	None.	LTS
ENG-2: The Project would not conflict with or obstruct a state or local plan for renewable energy or energy efficiency.	LTS	LUR-G-2, LUR-G-4, LUR-G-6, LUR-G-7, LUR-G-9, LUR-G-11, CIR-G-1, CIR-G-2, CIR-G-3, CIR-G-4, CHE-G-8, OSEC-G-14, OSEC-G-15, OSEC-G-25, LUR-P-1, LUR-P-8, LUR-P-11, LUR-P-12, LUR-P-13, LUR-P-16, LUR-P-18, LUR-P-24, CIR-P-1, CIR-P-2, CIR-P-3, CIR-P-4, CIR-P-16, CIR-P-17, CIR-P-19, CIR-P-20, CIR-P-21, CIR-P-22, CIR-P-23, CIR-P-24, CIR-P-25, CIR-P-26, CIR-P-27, CIR-P-32, CIR-P-33, CIR-P-34, CHE-P-5, OSEC-P-29, OSEC-P-41, OSEC-P-51, OSEC-P-57, OSEC-P-58, and OSEC-P-59.	None.	LTS
Geology and Soils				
GEO-1: The Project would not directly or indirectly cause potential substantial adverse effects involving the risk of geologic hazards.	LTS	CSES-G-10, CSES-G-11, CSES-P-17, CSES-P-18, CSES-P-19, CSES-P-20.	None.	LTS
GEO-2: The Project would not result in substantial soil erosion or the loss of topsoil.	LTS	CSES-P-20, OSEC-P-15, OSEC-P-16.	None.	LTS
GEO-3: The Project would not have a significant impact due to hazards associated with unstable soils, such as on- or off-site landslide, lateral spreading, subsidence, liquefaction, or collapse.	LTS	CSES-G-10, CSES-G-11, CSES-P-17, CSES-P-18, CSES-P-19, CSES-P-20.	None.	LTS
GEO-4: The Project would not create substantial direct or indirect risks to life or property due to the presence of expansive soils.	LTS	CSES-G-10, CSES-G-11, CSES-P-17, CSES-P-18, CSES-P-19, CSES-P-20.	None.	LTS

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GEO-5: The Project would not directly or indirectly destroy a unique paleontological resource or site or unique geologic feature.	LTS	OSEC-G-6, OSEC-P-12, OSEC-P-13.	None.	LTS
Greenhouse Gas Emissions				
GHG-1: The Project would not generate GHG emissions, either directly or indirectly, that may have a significant impact on the environment.	LTS	LUR-G-2, LUR-G-4, LUR-G-6, LUR-G-7, LUR-G-9, LUR-G-11, CIR-G-1, CIR-G-2, CIR-G-3, CIR-G-4, CHE-G-8, OSEC-G-19, OSEC-G-22, OSEC-G-23, OSEC-G-24, OSEC-G-25, OSEC-G-26, OSEC-G-27, OSEC-G-28, LUR-P-1, LUR-P-8, LUR-P-11, LUR-P-12, LUR-P-13, LUR-P-16, LUR-P-18, LUR-P-24, CIR-P-1, CIR-P-2, CIR-P-3, CIR-P-4, CIR-P-16, CIR-P-17, CIR-P-19, CIR-P-20, CIR-P-21, CIR-P-22, CIR-P-23, CIR-P-24, CIR-P-25, CIR-P-26, CIR-P-27, CIR-P-32, CIR-P-33, CIR-P-34, CHE-P-5, OSEC-P-34, OSEC-P-43, OSEC-P-46, OSEC-P-49, OSEC-P-51, OSEC-P-52, OSEC-P-53, OSEC-P-54, OSEC-P-55, OSEC-P-56, OSEC-P-57, OSEC-P-58, OSEC-P-59, OSEC-P-60, OSEC-P-61.	None.	LTS
GHG-2: The Project would not conflict with any applicable plan, policy or regulation adopted for the purpose of reducing the emissions of GHGs.	LTS			LTS
Hazards and Hazardous Materials				
HAZ-1: The Project would not create a significant hazard to the public or the environment through the routine use, transport, disposal, or accidental release of hazardous materials.	LTS	CSES-G-7, CSES-G-14, CSES-G-15, CSES-G-16, CIR-G-4, CSES-P-25, CSES-P-26, CSES-P-27, CSES-P-28, CSES-P-29, CSES-P-30, CSES-P-33, CSES-P-35, CIR-P-28, CIR-P-29, CIR-P-30.	None.	LTS
HAZ-2: The Project would not result in hazardous emissions or the handling of hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school.	LTS	CSES-G-7, CSES-G-14, CSES-G-15, CSES-G-16, CSES-P-25, CSES-P-26, CSES-P-27, CSES-P-28, CSES-P-29, CSES-P-30, CSES-P-33, CSES-P-35.	None.	LTS
HAZ-3: The Project would not create a significant hazard to the public or environment from a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5.	LTS	CSES-G-7, CSES-G-14, CSES-G-15, CSES-G-16, CSES-P-25, CSES-P-26, CSES-P-27, CSES-P-28, CSES-P-29, CSES-P-30, CSES-P-33, CSES-P-35.	None.	LTS
HAZ-4: The Project would not be located within an airport land use plan or, where such plan has not been adopted, within two miles of a public airport or public use airport.	LTS	NO-G-1, NO-G-2, NO-P-1.	None.	LTS

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HAZ-5: The Project would not impair implementation of or interfere with an adopted emergency response plan or emergency evacuation plan.	LTS	CSES-P-27, CSES-P-30, CSES-P-31, CSES-P-32, CSES-P-34, CIR-P-10, CIR-P-11.	None.	LTS
HAZ-6: The Project would not expose people or structures, either directly or indirectly, to a significant risk of loss, injury, or death involving wildland fires.	NI	CSES-P-27, CSES-P-30, CSES-31, CSES-P-32, CSES-P-34.	None.	NI
Hydrology and Water Quality				
HYD-1: The Project would not violate any water quality standards or waste discharge requirements or otherwise substantially degrade water quality.	LTS	OSEC-G-9, OSEC-P-14, OSEC-P-15, OSEC-P-16, OSEC-P-17, OSEC-P-18, OSEC-P-19, OSEC-P-20, OSEC-P-21, OSEC-P-22.	None.	LTS
HYD-2: The Project would not substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level.	LTS	None.	None.	LTS
HYD-3: The Project would not substantially alter the existing drainage pattern of the site or area in a manner that would result in substantial erosion or siltation on- or off-site; substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or offsite; create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff; and impede or redirect flood flows	LTS	OSEC-G-12, OSEC-G-13, OSEC-P-21, OSEC-P-22, OSEC-P-23, OSEC-P-24.	None.	LTS
HYD-4: The Project would not risk release of pollutants due to project inundation.	LTS	CSES-G-12, CSES-G-13, CSES-P-21, CSES-P-22, CSES-P-23, CSES-P-24.	None.	LTS
HYD-5: The Project would not conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan.	LTS	OSEC-G-9, OSEC-P-14, OSEC-P-15, OSEC-P-16, OSEC-P-17, OSEC-P-18, OSEC-P-19, OSEC-P-20, OSEC-P-21, OSEC-P-22.	None.	LTS

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Land Use and Planning				
LU-1: The Project would not physically divide an established community.	LTS	LUR-G-1, LUR-G-2, LUR-G-4, LUR-G-6, LUR-G-7, LUR-G-8, LUR-G-9, LUR-G-11, CCD-G-1, CCD-G-3, CCD-G-6, LUR-P-8, LUR-P-10, LUR-P-14, LUR-P-16, LUR-P-18, CCD-P-1.	None.	LTS
LU-2: The Project would not cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect.	LTS	LUR-G-2, LUR-G-5, LUR-G-11, LUR-G-12, OSEC-G-2, OSEC-G-4, OSEC-G-23, LUR-P-17, LUR-P-21, LUR-P-22, LUR-P-23, LUR-P-25.	None.	LTS
Noise				
NOI-1: The Project would not result in the generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies.	LTS	NO-G-1, NO-G-2, NO-G-3, LUR-G-10, LUR-G-13, LUR-G-14, CIR-G-3, CIR-G-4, NO-P-1, NO-P-2, NO-P-3, NO-P-4, NO-P-5, NO-P-6, NO-P-7, NO-P-8, LUR-P-17, LUR-P-19, LUR-P-22, LUR-P-24, CIR-P-10, CIR-P-12, CIR-P-28, CIR-P-29, CIR-P-30.	None.	LTS
NOI-2: The Project would not generate excessive groundborne vibration or groundborne noise.	LTS	NO-G-1, NO-G-2, NO-G-3, LUR-G-10, LUR-G-13, LUR-G-14, CIR-G-3, CIR-G-4, NO-P-1, NO-P-2, NO-P-3, NO-P-5, NO-P-6, NO-P-7, NO-P-8, LUR-P-17, LUR-P-19, LUR-P-22, LUR-P-24, CIR-P-10, CIR-P-12, CIR-P-28, CIR-P-29, CIR-P-30.	None.	LTS
NOI-3: The Project would not expose people residing or working in the project area to excessive noise levels generated by aircraft.	LTS	NO-G-1, NO-G-2, NO-P-1, NO-P-2, NO-P-3.	None.	LTS
Population and Housing				
POP-1: The Project would not induce substantial unplanned population growth in an area, directly nor indirectly.	LTS	LUR-G-4, LUR-G-5, LUR-G-9, LUR-G-12, OSEC-G-1, OSEC-G-10, LUR-P-1, LUR-P-16, LUR-P-18, LUR-P-223.	None.	LTS
POP-2: The Project would not displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere.	LTS	LUR-G-5, LUR-G-9, LUR-P-2, LUR-P-3, LUR-P-4, LUR-P-5.	None.	LTS

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Public Services				
PUB-1: The Project would not result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services: (i) fire protection, (ii) police protection, (iii) schools, (iv) parks, (v) other public facilities.	LTS	CSES-G-1, CSES-G-5, CSES-G-6, CSES-G-8, CSES-P-1, CSES-P-5, CSES-P-6, CSES-P-9, CSES-P-13, CSES-P-14, CSES-P-15, CSES-P-16, CSES-P-25, CSES-P-34.	None.	LTS
Recreation				
REC-1: The Project would not increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated.	LTS	RAL-G-1, RAL-G-2, RAL-G-3, RAL-G-4, RAL-G-5, RAL-G-6, RAL-G-7, RAL-P-1, RAL-P-2, RAL-P-3, RAL-P-4, RAL-P-5, RAL-P-6, RAL-P-7, RAL-P-8, RAL-P-9, RAL-P-10, RAL-P-11, RAL-P-12, RAL-P-13, RAL-P-14.	None.	LTS
REC-2: The Project would not have a significant impact due to inclusion of recreational facilities or required construction or expansion of recreational facilities which might have an adverse physical effect on the environment.	LTS	RAL-G-1, RAL-G-2, RAL-G-3, RAL-G-4, RAL-G-5, RAL-G-6, RAL-G-7, OSEC-G-1, OSEC-G-2, OSEC-G-3, RAL-P-1, RAL-P-2, RAL-P-3, RAL-P-4, RAL-P-5, RAL-P-6, RAL-P-7, RAL-P-8, RAL-P-9, RAL-P-10, RAL-P-11, RAL-P-12, RAL-P-13, RAL-P-14, CCD-P-6, CHE-P-29, OSEC-P-7.	None.	LTS
Transportation				
TR-1: The Project would not conflict with a program, plan, ordinance or policy addressing the circulation system, including transit, roadway bicycle and pedestrian facilities.	LTS	CIR-G-1, CIR-G-2, CIR-P-1, CIR-P-8, CIR-P-10, CIR-P-16, CIR-P-17, CIR-P-18, CIR-P-19, CIR-P-20, CIR-P-22.	None.	LTS
TR-2: The Project would conflict or be inconsistent with CEQA Guidelines Section 15064.3, Subdivision (b).	PS	CIR G-3, CIR-P-2, CIR-P-3, CIR-P-21, CIR-P-22, CIR-P-23, CIR-P-24, CIR-P-25, CIR-P-26.	None.	SU
TR-3: The Project would not substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment).	LTS	CIR-G-1, CIR-G-4, CIR-P-5, CIR-P-7, CIR-P-8, CIR-P-28, CIR-P-29, CIR-P-30.	None.	LTS

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TR-4: The Project would not result in inadequate emergency access.	LTS	None	None.	LTS
Tribal Cultural Resources				
TCR-1: The Project would not cause a substantial adverse change in the significance of a tribal cultural resource.	LTS	OSEC-G-6, OSEC-G-8, OSEC-P-9, OSEC-P-11.	None.	LTS
Utilities and Service Systems				
UTL-1: While the Project would not require or result in the relocation or construction of new or expanded water and wastewater treatment facilities, it could require or result in the relocation or construction of new or expanded stormwater drainage, electric power, natural gas, and telecommunications facilities. However, the construction or relocation of these facilities would not cause significant environmental effects.	LTS	OSEC-G-10, OSEC-G-12, OSEC-G-13, OSEC-G-14, OSEC-G-15, OSEC-G-25, OSEC-P-23, OSEC-P-23, OSEC-P-24, OSEC-P-27, OSEC-P-28, OSEC-P-29, OSEC-P-41, OSEC-P-51, 57, OSEC-P-58, OSEC-P-59.	None.	LTS
UTL-2: Sufficient water supplies are available to serve future development allowed by the Project and reasonably foreseeable future development during normal, dry and multiple dry years.	LTS	OSEC-10, OSEC-G-12, OSEC-G-13, OSEC-P-23, OSEC-P-25, OSEC-P-26, OSEC-P-27, OSEC-P-28.	None.	LTS
UTL-3: The Project would not result in a determination by the wastewater treatment provider which serves or may serve the project that it has inadequate capacity to serve the Project's projected demand in addition to the provider's existing commitments.	LTS	OSEC-G-10, OSEC-G-12, OSEC-G-13, OSEC-P-23, OSEC-P-27, OSEC-P-28.	None.	LTS
UTL-4: The Project would not generate solid waste in excess of state or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals.	LTS	OSEC-G-16, OSEC-P-30, SEC-P-31, OSEC-P-32.	None.	LTS
UTL-5: The Project would comply with federal, state, and local management and reduction statutes and regulations related to solid waste.	LTS	OSEC-G-16, OSEC-P-30, OSEC-P-31, OSEC-P-32	None.	LTS

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CHAPTER 1

Introduction

This Draft Environmental Impact Report (EIR) has been prepared in accordance with the California Environmental Quality Act (CEQA) to evaluate the potential environmental impacts of the Carson 2040 General Plan Update (Project). This chapter outlines the purpose and overall approach to the preparation of the Draft EIR. The City of Carson (City) is the lead agency responsible for ensuring that the Project complies with CEQA. Lead agency is defined by Section 21067 of CEQA as “the public agency which has the principal responsibility for carrying out or approving a project which may have a significant effect upon the environment”.

1.1 Purpose of the Draft EIR

1.1.1 Purpose

The primary intent of CEQA is to ensure that public agency decision-makers document and consider the environmental implications of their actions in order to avoid or minimize environmental damage that could result from the implementation of a project wherever feasible, and to balance environmental, economic, and social objectives. In accordance with Section 15121 of the State CEQA Guidelines, the purpose of the EIR is to serve as an informational document that:

“...will inform public agency decision-makers and the public generally of the significant environmental effect of a project, identify possible ways to minimize the significant effects, and describe reasonable alternatives to the project.”

The purpose of this EIR is to inform decision-makers and the general public of the potential environmental impacts resulting from the Project. The City is the Lead Agency under CEQA and is responsible for preparing this Draft EIR. This Draft EIR has been prepared in conformance with CEQA (California Public Resources Code [PRC] Section 21000 et seq.), and the State CEQA Guidelines (California Code of Regulations, Title 14, Section 15000 et seq.) and the City’s procedures for implementing CEQA. The principal State CEQA Guidelines sections governing content of this document are Sections 15120 through 15132 (Contents of an EIR), and Section 15168 (Program EIR). This EIR serves the following purposes:

- To satisfy CEQA requirements for analysis of environmental impacts by including a complete and comprehensive programmatic evaluation of the physical impacts of adopting and implementing the Project;
- To recommend a set of measures to mitigate any significant adverse impacts;
- To analyze a range of reasonable alternatives to the Project;

- To inform decision-makers and the public of the potential environmental impacts of the Project prior to taking action on the Project, and to assist City officials in reviewing and adopting the proposed General Plan update; and
- To provide a basis for the review of subsequent development projects and public improvements proposed within the Planning Area. Subsequent environmental documents may be tiered from the Final EIR.

The Project consists of policies, diagrams, and standards to guide the future development of the city, as described in greater detail in Chapter 2, *Project Description*, of this EIR. This Draft EIR contains analysis of all potential environmental impacts expected to result from buildout of the Project and implementation of the various policies and programs identified as part of the proposed General Plan update, including those that serve to avoid or minimize adverse environmental impacts. In accordance with CEQA requirements, the Draft EIR also identifies and evaluates alternatives to the Project, including the No Project Alternative, which represents the continued implementation of the current General Plan. An environmentally superior alternative will also be identified as part of the alternatives analysis.

1.1.2 Intended Uses of the Draft EIR

Section 15124(d) of the State CEQA Guidelines require EIRs to identify the agencies that are expected to use the EIR in their decision-making, and the approvals for which the EIR will be used. This EIR will inform the City, in addition to other responsible agencies, persons, and the general public, of the potential environmental effects of the Project and the identified alternatives. The City will use the EIR as part of its review and approval of the Project.

This EIR serves as the environmental document for all discretionary actions associated with development under the Project. This EIR is intended to be the primary reference document in the formulation and implementation of a Mitigation Monitoring and Reporting Program (MMRP) for the Project. This EIR is also intended to assist other responsible agencies in making approvals that may be required for development under the Project. The following federal, state, regional, and local government agencies may have jurisdiction over development proposals in the Planning Area:

- U.S. Army Corps of Engineers
- Federal Emergency Management Agency
- California Department of Fish and Wildlife
- California Department of Transportation
- Los Angeles County Transportation Commission
- Los Angeles Unified School District
- Compton Unified School District
- South Coast Air Quality Management District
- Los Angeles Regional Water Quality Control Board

The Project would require the following approvals and discretionary and ministerial actions by the City:

- **Planning Commission**
 - Recommendation to adopt the Project
 - Recommendation to certify the EIR pursuant to CEQA
- **City Council**
 - Adoption of the Project
 - Certification of the EIR pursuant to CEQA
 - Adoption of ordinances, guidelines, programs, and other mechanisms for implementation of the Project
- **Other City Boards and Commissions**
 - Adoption of programs or other actions that implement the Project

1.2 Type of EIR

This EIR is a program EIR, defined in Section 15168 of the State CEQA Guidelines as “An EIR addressing a series of actions that can be characterized as one large project and are related either: (1) geographically; (2) as logical parts in the chain of contemplated actions; (3) in connection with the issuance of rules, regulations, plans, or other general criteria to govern the conduct of a continuing program; or (4) as individual activities carried out under the same authorizing statutory or regulatory authority and having generally similar environmental impacts which can be mitigated in similar ways”.

Program EIRs can be used as the basic, general environmental assessment from an overall program of future projects, policies, and related implementation actions, such as the Project, intended to be developed or implemented over a 20-year planning horizon. A program EIR has several advantages. First, it provides a basic reference document to avoid unnecessary repetition of facts or analysis in subsequent project-specific assessments. Second, it allows the lead agency to look at the broad, regional impacts of a program of actions before its adoption and eliminates the redundant or contradictory approaches to the consideration of regional and cumulative effects.

As a programmatic document, this EIR presents a citywide assessment of the potential impacts of the Project. It does not separately evaluate subcomponents of the Project, nor does it assess project-specific impacts of potential future projects under the Project, all of which are required to comply with CEQA and/or the National Environmental Policy Act (NEPA), as applicable.

As a program EIR, the preparation of this document does not relieve the sponsors of specific projects from the responsibility of complying with the requirements of CEQA (and/or NEPA for projects requiring federal funding or approvals). As noted, individual projects are required to prepare a more precise, project-level analysis to fulfill CEQA and/or NEPA requirements as applicable. The lead agency responsible for reviewing these projects shall determine the level of review needed, and the scope of that analysis will depend on the specifics of the particular project. Pursuant to State CEQA Guidelines Section 15152 (Tiering), these projects may,

however, use the discussion of impacts in this EIR as a basis for their assessment of regional, citywide, or cumulative impacts, provided that the projects are consistent with the General Plan and the data and assumptions used in this EIR remain current and valid.

In accordance with Section 15121 of the State CEQA Guidelines, this EIR provides specific information regarding the environmental effects associated with the development of the Project, and ways to minimize any significant environmental effects through mitigation measures or reasonable alternatives to the proposed General Plan update. For some effects, significant environmental impacts cannot be mitigated to a level considered less than significant; in such cases, impacts are considered significant and unavoidable. In accordance with Section 15091 of the State CEQA Guidelines, if a public agency approves a project that has significant impacts that are not substantially mitigated (i.e., significant unavoidable impacts where impacts cannot be mitigated to less than significant levels), the agency must state in writing the specific reasons for approving the project, based on the Final EIR and any other information in the public record for the project. This is known as a “statement of overriding considerations.”

This document analyzes the environmental effects of the Project to the degree of specificity appropriate to the Project, as required under Section 15146 of the State CEQA Guidelines. The analysis considers the construction and operational activities associated with the Project, to determine the short-term and long-term environmental effects. This EIR discusses both the direct and indirect impacts of this Project, as well as the cumulative impacts associated with other past, present, and reasonably foreseeable future projects.

1.3 Public Review Process

In compliance with the State CEQA Guidelines, the City has taken steps to provide opportunities for the public to participate in the environmental review process. During the preparation of the Draft EIR, an effort was made to contact various state, regional, and local government agencies and other interested parties to solicit comments and inform the public of the Project.

1.3.1 Notice of Preparation

Although a Notice of Preparation (NOP) was distributed in 2017, in light of the passage of time and the revisions to the Project, the City issued a Recirculated NOP to state, regional, and local agencies, and members of the public for a 30-day period commencing March 22, 2021, and ending April 21, 2021. The purpose of the NOP was to formally convey that the City was preparing a Draft EIR for the Project, to present the environmental topics preliminarily identified by the City for evaluation in the Draft EIR, and to solicit input regarding the scope and content of the information to be included in the Draft EIR. The Recirculated NOP included notification that a new public scoping meeting would be held to further inform public agencies and other interested parties of the Project and to solicit input regarding the Draft EIR. The City posted the Recirculated NOP on the City Planning website along with information regarding the process for providing comments. The NOP and Recirculated NOP and comments received during the scoping process are included in Appendix A of this EIR.

1.3.2 Public Scoping Meeting

The City conducted the first scoping meeting on December 7, 2017, at 4:00 p.m. in the Juanita Millender-McDonald Community Center, located at 801 E Carson St, Carson, CA. The second scoping meeting for the Recirculated NOP was a webinar held virtually over Zoom on April 14, 2021, at 6:30 p.m. The scoping meetings provided interested individuals, groups, and public agencies the opportunity to provide oral and written comments to the lead agency regarding the scope and focus of the Draft EIR as described in the NOP. The meetings included a presentation by the City and their environmental consultant that included an overview of the Project, information regarding the CEQA EIR process and opportunities for public input, issues identified for analysis in the EIR, and solicitation of oral and written comments on environmental issues and alternatives the public would like to see evaluated in the EIR.

1.3.3 Comments Received

Comments on the scope and content of the EIR were received orally at the two scoping meetings and otherwise received in writing during the 30-day circulation periods for the NOP and Recirculated NOP. The City received four written comment letters responding to the NOP and nine written comment letters responding to the Recirculated NOP. Comment letters received during the NOP circulation periods are provided in Appendix A of this EIR and are summarized in the *Executive Summary*, in the subsection entitled *Areas of Controversy/Issues to be Resolved*.

1.4 Scope of the EIR

1.4.1 Planning Horizon

For analytic purposes in this EIR, the base year is 2016 unless otherwise noted, as this date corresponds with the original NOP circulated in 2017, and the horizon year representing future conditions is 2040. In cases where current data is not available, the most recent known data is used to depict baseline conditions. The horizon year of 2040 represents the target year of the Project when projects and programs are anticipated to be fully implemented. In reality, full implementation of the Project may take more or less than 20 years.

1.4.2 Environmental Issue Areas

This EIR assesses the potential environmental impacts that could occur with implementation of the Project. Section 15064 of the State CEQA Guidelines states that in evaluating the significance of the environmental effect of a project, the Lead Agency shall consider direct physical changes in the environment which may be caused by the project and reasonably foreseeable indirect physical changes in the environment which may be caused by the project.

The scope of the EIR includes evaluation of potentially significant environmental issues raised in response to the NOP, the Recirculated NOP, and during scoping discussions. As noted above, the NOP, the Recirculated NOP, and all comment letters received during both comment periods are

included and discussed in Appendix A. Based on the scoping process, the following environmental issue areas are addressed in detail in this EIR:

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

State CEQA Guidelines Section 15128 requires a statement briefly indicating the reasons that various possible significant effects of a project were determined not to be significant and were therefore not discussed in detail in the EIR. Pursuant to State CEQA Guidelines Section 15128 (Effects Not Found to Be Significant) environmental impacts related to agricultural and forestry resources, mineral resources, and wildfires were not considered significant and therefore, are not fully discussed in the EIR. (See Chapter 5, *Other CEQA Considerations*, for a brief summary). In addition, Chapter 5 addresses environmental topics required by CEQA that are not covered within the other chapters of this EIR, including: (1) significant unavoidable impacts, (2) irreversible environmental changes, (3) growth inducing impacts, and (4) potential secondary effects.

Consistent with State CEQA Guidelines (Section 15126.6[d]), this EIR includes the assessment of a reasonable range of alternatives to the Project that could feasibly attain most of the project objectives while avoiding or substantially lessening the environmental effects of the Project. This analysis is included in Chapter 4, *Alternatives*.

1.5 Format of the Draft EIR

The Draft EIR includes an executive summary, seven chapters, and appendices, which are organized as follows:

ES, Executive Summary, provides an overview of the entire document in a concise, summarized format. It briefly describes the Project (location and key Project features), the CEQA review process and focus, identifies effects found to be significant and unavoidable, identifies areas of controversy, provides a summary of the Project alternatives (descriptions and conclusions regarding comparative impacts), and provides a summary of Project impacts, Project characteristics and mitigation measures, and the level of impact significance following implementation of mitigation measures.

Chapter 1, Introduction, describes the purpose and use of the EIR, provides a brief overview of the Project and the environmental review process, and outlines the organization of the EIR.

Chapter 2, Project Description, describes the location, objectives, and physical and operational characteristics of the Project.

Chapter 3, Environmental Setting, Impacts, and Mitigation Measures, contains the environmental setting, project and cumulative impact analyses, mitigation measures, and conclusions regarding the level of significance after mitigation for each of the environmental topic areas indicated above.

Chapter 4, Alternatives, evaluates the environmental effects of three feasible project alternatives, including the No Project Alternative. This chapter also identifies the environmentally superior project.

Chapter 5, Other CEQA Considerations, includes a discussion of environmental topic areas required by CEQA that are not covered in other chapters. This includes impacts found not to be significant, unavoidable adverse impacts, irreversible environmental changes, and growth inducing impacts.

Chapter 6, References, identifies the documents (printed references) and individuals (personal communications) consulted in preparing this EIR.

Chapter 7, List of Preparers, lists the individuals involved in preparation of this EIR.

The environmental analyses in this EIR are supported by the following appendices:

- Appendix A: NOP and Recirculated NOP with Corresponding Comment Letters
- Appendix B: Air Quality Data
- Appendix C: Energy Data
- Appendix D: Greenhouse Gas Emissions Data
- Appendix E: Noise Measurement Data
- Appendix F-1: VMT Analysis Methodology
- Appendix F-2: Link-Based VMT by Vehicle Type and Occupancy
- Appendix G: Native American Consultation

1.6 Public Review of the Draft EIR

The Draft EIR is subject to a 45-day review period in which the document is made available to responsible and trustee agencies and interested parties. In compliance with the provision of Sections 15085(a) and 15087(a)(1) of the State CEQA Guidelines, the City, serving as the Lead Agency: (1) published a Notice of Availability (NOA) of a Draft EIR that indicated that the Draft EIR was available for review at the City's Community Development Department (701 E. Carson Street, Carson, CA 90745); (2) posted the NOA and the Draft EIR on the City's General Plan

update website (www.carson2040.com); (3) prepared and transmitted a Notice of Completion (NOC) to the State Clearinghouse; and (4) sent a NOA to NOP commenters as well as the last known name and address of all organizations and individuals who previously requested such notice in writing or attended public meetings about the Project. Proof of publication is available at the City. The public comment period begins September 2, 2022, and will end on October 17, 2022. The Draft EIR is available for review online at: <https://www.carson2040.com/>. Hardcopies of the Draft EIR are available for review at City Hall.

Any public agency or members of the public desiring to comment on the Draft EIR must submit their comments in writing or send them via email to the following address prior to the end of the public review period:

Mail: Alvie Betancourt, Planning Manager
City of Carson
701 East Carson Street
Carson, CA 90745

Email: abetancourt@carsonca.gov

Upon the close of the Draft EIR public review period, the City will evaluate and prepare responses to all written comments received during the public review period. A Final EIR will then be prepared. The Final EIR will consist of the Draft EIR, any necessary revisions to the Draft EIR, written comments received during the public circulation period for the Draft EIR, and City responses to those comments.

CHAPTER 2

Project Description

Consistent with Section 15168 of the State CEQA Guidelines, this Draft Environmental Impact Report (EIR) provides a programmatic analysis of the environmental impacts associated with the projected buildout of the Carson 2040 General Plan Update (Project). As described in Section 15168 of the State CEQA Guidelines, program-level environmental review documents are appropriate when a project consists of a series of actions related to the issuance of rules, regulations, and other planning criteria. The project that is the subject of this EIR consists of a long-term plan that will guide future development activities and actions in the city of Carson.

California Government Code Section 65300 et seq. mandates that all counties and incorporated cities prepare a general plan that establishes policies and standards for future development, housing affordability, and resource protection. State law encourages cities to keep general plans current through regular updates. The Project includes a comprehensive update of all elements of the Carson General Plan, except for the Housing Element, which was recently adopted in February 2022, and would guide future land use decisions in Carson, providing a long-term vision for the city and, through its policies, would indicate how that vision would be achieved. The Project would be the primary policy document guiding growth and development within the Planning Area through the planning horizon year of 2040. Together with the Zoning Ordinance and related sections of the Carson Municipal Code, the Project would serve as the basis for planning-related decisions made by City of Carson (City) staff, the Planning Commission, and the City Council.

By law, a general plan must be an integrated, internally consistent statement of City policies. Government Code Section 65302 requires that a general plan include the following seven elements: Land Use, Circulation, Housing, Conservation, Open Space, Noise, and Safety. According to Senate Bill (SB) 1000 and Gov. Code, Section 65302, since disadvantaged communities have been identified within Carson, the proposed General Plan update must also address Environmental Justice either as a standalone element or integrating related goals, policies, and objectives throughout other elements. This is included in the proposed General Plan update as a standalone element. Additional elements may be included as well, at the discretion of the City. The proposed General Plan update includes three optional elements: Economic Development; Recreation and Active Lifestyle; and Community Character and Design. All elements have equal weight, and no one element supersedes another. Cities may amend the general plan four times a year (each amendment may include any number of changes), and cities are encouraged to keep the plan current through regular updates.

This chapter introduces the purposes and objectives of the Project and summarizes specific information describing the proposed General Plan update. This includes a description of the existing regional and local project setting; an outline of the projected population and employment growth rates, and development patterns through the 2040 planning horizon year; the proposed land use diagram; key data tables; and key policy directions. These aspects of the Project provide the basis for the environmental analysis in Chapter 3.

2.1 Regional Location and Project Boundaries

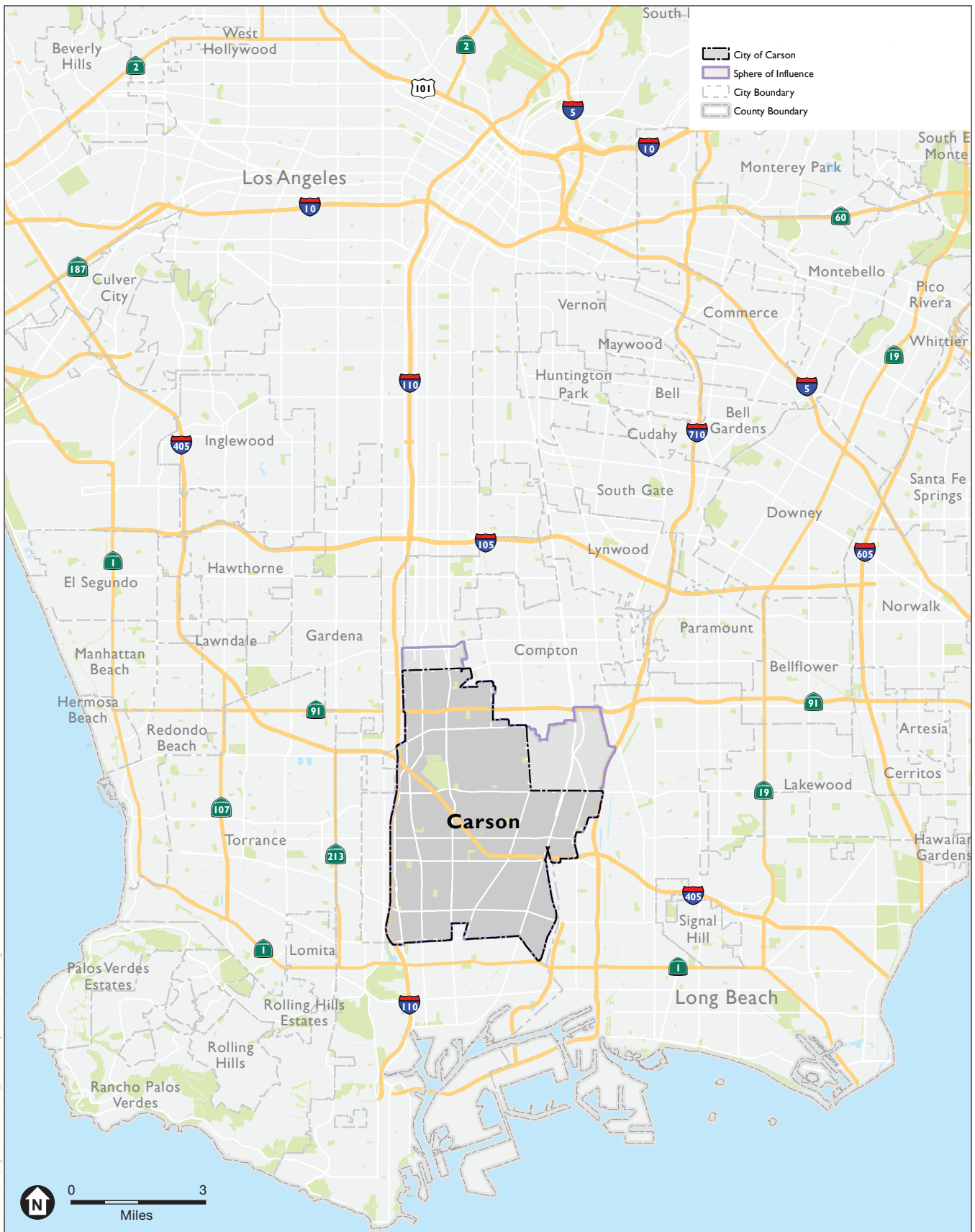
2.1.1 Regional Location

The city of Carson is located in the South Bay region of southern Los Angeles County. The city is located about 13 miles south of downtown Los Angeles. Interstate 405 (I-405) runs through Carson, and Interstate 110 (I-110) and Interstate (I-710) are located just outside the city boundaries, connecting Carson to other communities throughout the region. In addition, Carson is accessible via public transportation, including via Los Angeles Metro bus and light rail lines. The regional setting is depicted in **Figure 2-1**, *Regional Setting*.

2.1.2 Planning Area

The General Plan Planning Area, as shown in **Figure 2-2**, *Planning Area*, includes the city of Carson and its unincorporated sphere of influence (SOI). As shown on the figure, the Planning Area is bounded by East Alondra Boulevard and the city of Compton on the north, the city of Long Beach on the east, the Los Angeles neighborhood of Wilmington on the south, and I-110 and South Figueroa Street on the west. The SOI includes a portion of unincorporated Los Angeles County, located in the northeast section of the Planning Area north of Del Amo Boulevard and east of Wilmington Avenue. The SOI is defined as the ultimate physical boundary and service area of the city, and it encompasses territory that is envisioned to be the city's ultimate service area. The Local Agency Formation Commission for the County of Los Angeles has jurisdiction over defining Carson's SOI and acts on annexations.

The Planning Area comprises approximately 12,120 acres, or about 18.9 square miles, including all of the city of Carson (10,151 acres) as well as 1,969 acres of unincorporated land within the city's SOI. Nearly half (47.2 percent) of the Planning Area is zoned for industrial uses, followed by 25.5 percent for residential uses, 10.3 percent for parks, recreation, public, and community facilities, and 5.5 percent for commercial uses. The remaining 11.5 percent consists of vacant land, rights-of-way, and other uses.



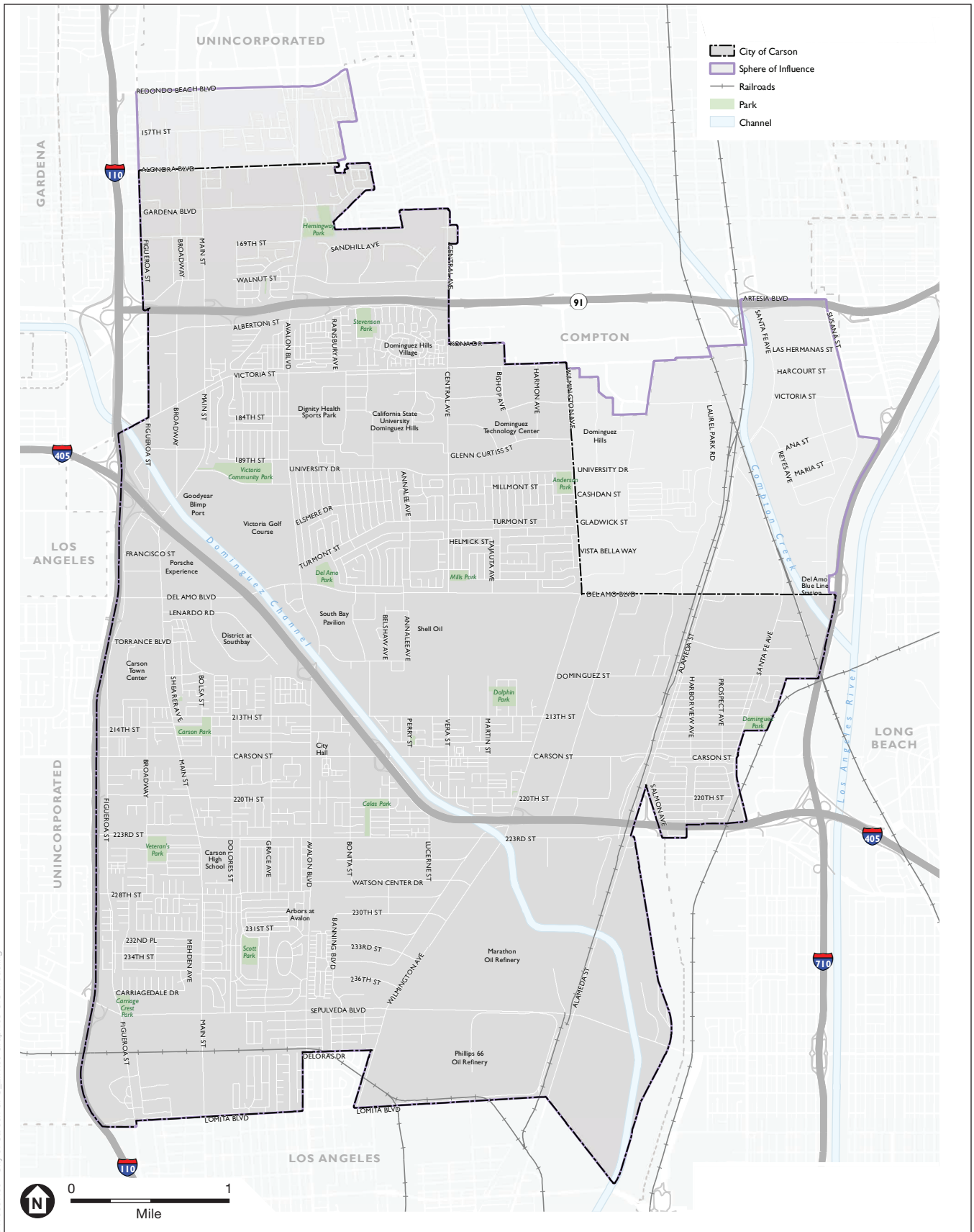
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SOURCE: County of Los Angeles, 2017;
City of Carson, 2020, Dyett & Bhatia, 2021

Carson General Plan Update

Figure 2-1
Regional Setting





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SOURCE: Dyett & Bhatia, 2021

Carson General Plan Update

Figure 2-2
Planning Area



2.2 Purpose and Objectives of the Project

As required under State CEQA Guidelines (California Code of Regulations [CCR] 15124), this section provides a description of the Project's purpose and objectives.

2.2.1 Purpose

California Government Code Section 65300 requires each city and county in California to adopt a general plan "for the physical development of the county or city, and any land outside its boundaries which...bears relation to its planning." The General Plan can be considered the City's development constitution, containing both a statement of the community's vision of its long-term development as well as the policies to support that vision by guiding the physical growth of the city. The Draft 2040 General Plan Update contains policies to guide decision-making related to land use and community character; economic development; transportation; parks and public services; safety; noise; environmental justice; healthy communities; and open space and resource conservation. The General Plan is a document adopted by the City Council to serve the following purposes:

- Establish a long-range vision that reflects the aspirations of the community and outlines steps to achieve this vision through its policies;
- Guide decision-making related to development, housing, transportation, environmental quality, public services, parks, open space, and environmental justice;
- Help Carson achieve compliance with applicable state and regional policies, including housing production and environmental regulations;
- Allow City departments, other public agencies, and private developers to design projects that will enhance the character of the community, preserve environmental resources, and minimize hazards; and
- Provide the basis for establishing and setting priorities for detailed plans and implementing programs, such as the zoning ordinance and future specific plans.

The proposed General Plan update would replace the existing 2004 General Plan in its entirety. While attainment of the development projections outlined in the proposed General Plan update would depend on economic and market conditions, the horizon for this is anticipated to be year 2040.

2.2.2 Objectives

The Project will establish the course for the next two decades for the city to foster a vibrant and sustainable community, respond to an increasingly diverse and aging population, and addresses the myriad of physical, environmental, and other challenges that the city faces. The goals and policies addressed in proposed General Plan update are intended to respond to these challenges. At the outset of the General Plan update process, the following specific objectives were established for the Project:

- Work with the community to articulate a vision for the city, and translating this vision into a viable implementation program
- Ensure balanced land use development that benefits residents and businesses

- Foster transportation improvements that allow people to easily and safely get around the city by driving, walking, biking, and/or taking transit
- Enhance quality of life and community character
- Improve the City’s fiscal and economic health
- Revitalize the community for a diverse, aging, and changing population
- Coordinate with regional planning initiatives and state mandates regarding sustainability, greenhouse gas emissions, and environmental justice
- Establish a long-range vision that reflects the aspirations of the community and outlines steps to achieve this vision
- Establish long-range development policies that will guide City departments, as well as Planning Commission, City Council, and City department decision-making
- Provide a basis for judging whether specific development proposals and public projects are in harmony with plan policies
- Plan in a manner that meets future needs based on the projected population and job growth;
- Allow City departments, other public agencies, and private developers to design projects that will preserve and enhance community character and environmental resources, and minimize hazards
- Provide the basis for establishing and setting priorities for detailed plans and implementing programs, such as the zoning ordinance, subdivision regulations, specific and master plans, the Capital Improvement Program, the Housing Element, and the Local Hazard Mitigation Plan
- Reduce community-wide GHG emissions consistent with statewide targets

2.3 Project Characteristics

2.3.1 Planning Horizon

While buildout horizon of the proposed General Plan update is not specified in the document, the development projections in the proposed General Plan update are projected to be attained by 2040, which forms the General Plan planning horizon.

2.3.2 Planning Process

The City of Carson General Plan was last updated in 2004. The Project is a comprehensive reexamination of Carson’s planning context and the community’s vision and involved close collaboration with Carson residents and elected officials in a variety of forums to ensure that the General Plan closely reflects the community’s goals and priorities through the Plan’s 2040 planning horizon. The City initiated the General Plan update process in 2017 with a series of community outreach events and launch of the project website (www.Carson2040.com). Since that time, City staff and the planning consulting team have completed a myriad of studies, evaluations, and community outreach events, information on which is available on the project website. The planning process has been guided by a City Council–appointed General Plan Advisory Committee (GPAC), with several meetings of the Planning Commission and the City Council at key stages.

The General Plan update process has gone through multiple steps to culminate into a finished plan, including:

- **Vision and Issue Identification.** Includes community engagement and issue identification, and was undertaken via stakeholder meetings, meetings with City bodies, engagement with the GPAC, community workshops, and a citywide survey.
- **Existing Conditions, Trends, and Opportunities Assessment.** Includes preparing background reports about existing conditions, opportunities, and challenges.
- **Alternatives, Preferred Plan, and Key Goals.** Includes formulating three alternative land use and circulation strategies for the city, assessing public opinion about the alternatives, and identifying opportunities that warrant further analysis followed by identifying the community's preferred land use plan and developing policies that support this vision.
- **Draft and Final General Plan Environmental Impact Report (EIR).** Includes preparing a Draft EIR for the General Plan and responding on comments received on this draft to produce the Final EIR.
- **Housing Element.** The Housing Element for the 6th Cycle (2021–2029) was adopted separately by the City Council in February 2022.

2.3.3 Outreach Activities

The proposed General Plan update would not be possible without the input of Carson community members, stakeholders, elected officials, advisory groups, and all others that have an interest in the future of Carson. At the kickoff, a community visioning workshop held at Juanita Millender-McDonald Community Center, supplemented with neighborhood-scaled outreach, helped to establish early direction for the proposed General Plan update. An online community survey was conducted in English and in Spanish early in the process to elicit community members' visions for the future of Carson and major issues related to various aspects of life. Additional virtual and in-person public workshops and surveys were conducted to gather input on different plan alternatives as well as on the development of the final General Plan.

The GPAC served in an advisory role to the Planning Commission and the City Council; the GPAC met regularly throughout the course of the project to help define community input into a shared vision, brainstorm issues and ideas, and review the policy content of the General Plan to ensure that it met the needs and desires of the community. Other community members also attended the GPAC meetings and provided input, as well as at City Council and Planning Commission workshops and hearings that were held throughout the General Plan update process. The ideas and feedback gathered through the community outreach process helped shape the policies and approaches that are embedded within this General Plan.

2.3.4 Vision and Guiding Principles

A vision is an aspirational description of what the community would like to be in the future. It is a summary of the shared goals to be achieved by the Carson General Plan and, along with the guiding principles, sets policy direction. The Vision Statement and Guiding Principles are based on input from the community, developed through stakeholder interviews, a community workshop

and pop-up outreach, GPAC meetings, City Council and Planning Commission workshops, and an online community survey.

Vision Statement

Carson in 2040 is a vibrant, diverse, and energetic place that embraces technology, creativity, and innovation. Residents have access to quality jobs, housing, education, services and a fiscally-sound government. Businesses have access to infrastructure, investment, workforce training, and a collaborative environment. The community is filled with thriving neighborhoods and strategically located new development with inviting spaces for working, living, learning, dining, gathering, and recreation.

Guiding Principles

The proposed General Plan update is organized into elements structured around the core values of the Vision and Guiding Principles, while meeting state law requirements for comprehensiveness. Below are the Guiding Principles that guide the goals and policies listed in each element.

1. Embrace development and technology that fosters an adaptable, modern city.

As Carson’s demographics and economy evolve, the city welcomes new technologies that complement an adaptive environment, such as public infrastructure for electric vehicles, wi-fi networks and renewable energy. The General Plan encourages the development of flexible spaces that can adapt to changing patterns in population, retail trends, and job production. The “Future Unlimited” city will be promoted as a 21st century city that leverages new industries and ideas to shape the city of the future.

2. Promote vibrant, safe, and walkable mixed-use districts and neighborhoods, and revitalized corridors.

The General Plan promotes “complete neighborhoods” with a range of everyday amenities within easy distances, and a richer array of activities and uses in all parts of the city. Districts and buildings should accommodate a diversity of complementary uses, including mixed flexible office space, retail, dining, residential, hotels, and other compatible uses, to foster vibrant, safe, and walkable environments. Public amenities are incorporated into mixed-used districts that are attractive to residents, workers, and students. The Plan aims to extend the energy of the successes of Carson Street’s redevelopment to other major corridors, such as Avalon Boulevard, Main Street, Del Amo Boulevard, and Broadway. The General Plan promotes development that fosters revitalization, while ensuring scale and building heights are compatible with surrounding uses.

3. Provide a diverse array of housing types to meet the needs of all segments of the community.

The General Plan encourages and enables the development of a mix of housing types that provide Carson residents with choice and flexibility. Carson will meet its need for new housing to support future population growth and ensure that affordable and market-rate housing needs are met. Housing will be available across generations so that new residents, aging residents, workers, students, and families have access to quality housing. New housing can be provided on underutilized opportunity sites, as well as through the rehabilitation of older, lower-quality housing. The General Plan also seeks to promote live-work places in transitioning industrial districts.

4. Support a diversified economy with a range of employment opportunities for all residents, a fiscally-sound local government, and investment in infrastructure.

The General Plan promotes a diversified economic base and seeks to capitalize on Carson’s location and assets—strong industrial economy, access to major freeways, rail corridors, airports, and the ports of Long Beach and Los Angeles, and the presence of California State University, Dominguez Hills—by supporting and assisting business development and mitigating constraints to economic investment. The Plan identifies opportunity sites in a variety of infill locations that can attract hotel, office, industrial, and research and development uses, which in turn will provide jobs, cement Carson’s importance in the regional and national economies, and help the City achieve fiscal sustainability. More jobs will be created within Carson, enhancing social and economic mobility for residents and reducing need for commuting into and out of the city. Carson will seek public-private partnerships and outside investment in order to improve infrastructure and attract major businesses and facilities.

5. Encourage development of regional-scale destinations, as well as neighborhood-serving retail and amenities.

Carson has a unique opportunity to develop a retail, entertainment, and hospitality destination center to serve the entire South Bay region at the confluence of the region’s two major freeways—I-405 and I-110—an area historically dominated by landfills, waste transfer, recycling and other similar uses, where environmental remediation is nearly complete. Complementing this, the General Plan locates new neighborhood mixed-use centers to enhance resident access to neighborhood-serving stores, restaurants and other commercial uses that are principally clustered along Carson Street, at great distances from many neighborhoods.

6. Foster harmony between industrial and residential land uses.

Residential and industrial land uses, including heavy industrial and logistics, often border each other. Though many industrial facilities were designed to be compatible with nearby residential uses, there are abrupt transitions in some places between residential and industrial uses. The General Plan promotes developing greenways and transitional land uses along these edges to create buffers. Creating buffers will minimize noise and air pollution impacts on residents. The General Plan also explores the possibility of adjusting truck routes to limit areas of impacts on residential neighborhoods. Streetscapes along corridors will be enhanced in transition areas through planting of trees, attractive and visually consistent walls and fences, and high-quality design.

7. Improve public health and sustainability.

The General Plan addresses both the social and physical determinants of health. Public health is promoted through enhanced access to housing, education, and jobs; environmental remediation of sites; and minimizing exposure to hazardous materials. Carson will become a leader in clean industrial development with state-of-the-art facilities, pollution control measures, air quality monitoring, renewable and reliable energy sources, and brownfield redevelopment.

Greenhouse gas emissions from energy use and transportation—the two largest sources of emissions in Carson—are reduced by promoting green building techniques, renewable energy, and energy efficiency in new construction, and retrofit of existing buildings. The city will decrease its reliance on automobiles through increasing access to public and active transportation, and infrastructure improvements to promote walking, biking, ride-sharing, and zero emissions vehicles.

8. Promote development of a cohesive open space system.

The General Plan seeks to promote development of a cohesive urban open space system, anchored by an open space recreational corridor along Dominguez Channel, with pedestrian and bicycle linkages to surrounding neighborhoods and community parks. The General Plan supports a balance of active and passive recreational opportunities to serve all segments of the population, while ensuring that these facilities can be maintained over time. As the city grows, Carson will provide adequate park and recreational facilities for both an increased population and changing demographics. New open spaces may be created through extending the concept of the public realm with new open space developed as plazas, privately-owned public open spaces, publicly owned park facilities, multi-use paths, and greenways.

9. Enhance the public realm and promote quality design.

A cohesive image for Carson can be cultivated through consistent streetscapes, improved sidewalks, well-maintained landscaping, and building design integrated with the public realm. Design diversity and visual richness are encouraged by promoting a variety of architectural building styles and promoting high-quality design.

10. Emphasize a diversity of transportation modes and choices.

The General Plan incorporates the development of “complete streets,” which aims to improve connectivity, accessibility, and safety for all modes of transportation, and promotes redesign of arterials that traverse the city to promote bicycle movement and easier pedestrian crossings. New roadway and pedestrian connections will result in less circuitous traffic, and help connect neighborhoods to schools, daily services, recreation, and other amenities, and key destinations such as the Metro A Line Station and the Carson Street corridor. Pedestrian safety can be improved through crosswalks, bulbouts, and signal timing.

2.3.5 General Plan Organization

California grants local authorities power over land use decisions. As a result, cities have considerable flexibility in preparing their general plans provided state requirements are met. The California Government Code establishes both the content of general plans and rules for their adoption and subsequent amendments. Together, state law and judicial decisions establish three overall guidelines for general plans; they should be:

- **Comprehensive.** The general plan must be geographically comprehensive, applying throughout the entire incorporated area and the SOI. The general plan must also address the full range of issues that affect the city’s physical development.
- **Internally Consistent.** The general plan must fully integrate its separate parts and relate them to each other without conflict. “Horizontal” consistency applies as much to figures and diagrams as to the general plan text. It also applies to data and analysis as well as policies. All adopted portions of the general plan, whether required by state law or not, have equal legal weight. None may supersede another, so the general plan must resolve conflicts among the provisions of each element.
- **Long-Range.** Because anticipated development will affect the city and the people who live or work there for years to come, state law requires every general plan to take a long-term perspective. This General Plan uses the year 2040 as its planning horizon.

Additionally, state law requires all general plans to address eight mandatory elements: land use, circulation, conservation, open space, safety, noise, housing, and environmental justice. The proposed General Plan update includes the mandatory elements plus additional elements, summarized in **Table 2-1, *State Requirements and General Plan Relationship***. The chapters of the Project are summarized as follows.

- **Chapter 1: Introduction.** This chapter presents the Vision and Guiding Principles that guide the proposed General Plan update, context and background for the Planning Area, summarization of community outreach, related plans, and overall General Plan organization and amendments.
- **Chapter 2: Land Use and Revitalization.** This chapter provides the physical framework for development in the Planning Area through inclusion of a land use diagram and land use designation descriptions. It establishes policies related to location and intensity of development, and citywide land use policies.
- **Chapter 3: Circulation.** This chapter includes policies, programs, and standards to enhance capacity and circulation. It identifies future improvements and addresses alternative transportation systems, bicycling and pedestrian facilities, and parking.
- **Chapter 4: Community Character and Design.** This chapter provides policies and direction on design approaches for key areas throughout Carson, including within the Core, Neighborhood Villages, employment centers, and Greenway Corridors.
- **Chapter 5: Recreation and Active Lifestyle.** This chapter outlines policies and standards relating to parks and recreation, including park classifications, opportunities for future parks, and design and programming.
- **Chapter 6: Community Health and Environmental Justice.** This chapter addresses topics related to public health and environmental justice, including policies to improve community health and reduce pollution exposure for areas identified as disadvantaged communities.
- **Chapter 7: Community Services, Education, and Safety.** This chapter seeks to enhance the quality of life for Carson residents and promote a healthy and livable community. It includes policies related to education and community facilities, public safety services, seismic and geologic hazards, flood hazards, and hazardous materials.
- **Chapter 8: Open Space and Environment Conservation.** This chapter outlines policies relating to habitat, open space, cultural, and biological resource conservation, water quality, air quality, solid waste and recycling, greenhouse gas emissions, and climate change.
- **Chapter 9: Noise.** This chapter includes policies to reduce unwanted noise exposure throughout Carson.
- **Chapter 10: Economic Development.** This chapter outlines the City’s economic development objectives and serves to ensure that economic decision making is integrated with other aspects of the city’s development.

In addition, housing elements are a part of a jurisdiction’s General Plan to address the community’s housing needs, prioritize housing goals, and to establish housing-related programs. Housing elements are required by state law to be updated more frequently than the General Plan and are typically published as separate documents. Carson’s 2021–2029 Housing Element was adopted by the City Council in February 2022 and is published separately.

**TABLE 2-1
STATE REQUIREMENTS AND GENERAL PLAN RELATIONSHIP**

Required Element	Locations in General Plan
Land Use	Chapter 2: Land Use and Revitalization
Circulation	Chapter 3: Circulation
Conservation	Chapter 8: Open Space and Environment Conservation
Open Space	Chapter 8: Open Space and Environment Conservation
Safety	Chapter 7: Community Services, Education, and Safety
Noise	Chapter 9: Noise
Environmental Justice	Chapter 6: Community Health and Environmental Justice
Housing	Contained in a separate document

2.3.6 Land Use Approach

The General Plan seeks to further the city’s evolution from an industrial and suburban community to a complete city with an integrated mix of housing, employment, educational, cultural, and recreational options balanced with industrial uses. The General Plan focuses development in the Core, and in centers around the Core, expanding on the energy and success of recent development along West Carson Street and Avalon Boulevard, as well in other locations in the community. Development in the centers, corridors, and large opportunity sites such as the Shell property are envisioned to be connected with Boulevards with improved streetscapes, community gathering spaces, and better pedestrian- and bicycle-oriented streets to foster more vital and livable neighborhoods and districts.

The General Plan outlines strategies for greater integration of uses in different parts of the city and a better connection between employment and residential uses, with more areas designated for mixed-use development rather than single use. It recognizes the physical elements that help define the character of Carson, including existing residential neighborhoods, Carson’s central Core, industrial/business centers, and corridors. Together, these elements represent the future urban structure of the city and the relationship between them, as shown in Figure 2-2.

Strategies include:

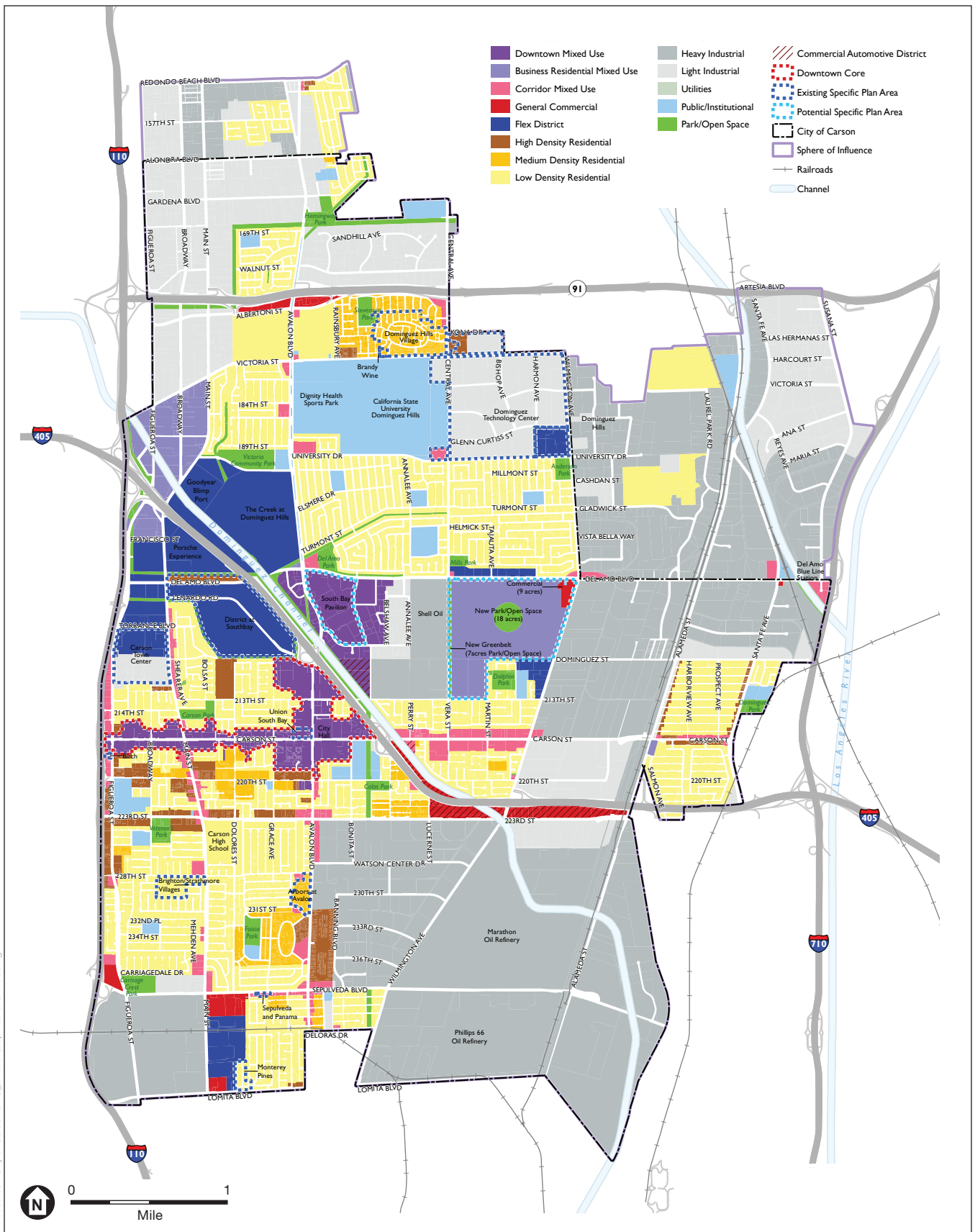
- Most new development will occur in the Core, which encompasses the Downtown Mixed-Use designation along Carson Street and Avalon Boulevard, west of I-405. This builds on the continued momentum of recent development and design improvements in downtown (along West Carson Street), new development underway along Avalon Boulevard; this area in the Core would have the highest intensities. Landscaping, streetscape, pedestrian, and bicycle network improvements will complement the proposed land uses.
- Key industrial areas have been designated as Flex District to limit logistic and heavy truck uses and promote a flexible range of uses for industrial sites being remediated for urban uses. The Flex District land use designation permits office, residential, hotel, retail/commercial, research and development office parks, light industrial/maker uses, and neighborhood commercial uses.

- The Business Residential Mixed-Use north of the Flex District east of I-110 provides live-work units, residential, office, light industrial and manufacturing uses (such as breweries or coffee roasteries), and other similar uses, in an area that is emerging as a vibrant district with a diversity of uses.
- Most residential neighborhoods are retained in their existing use and development density patterns, with enhanced streetscapes and connections to open spaces, and landscaped buffers between industrial and residential uses as feasible.
- The Shell site is envisioned to become a research and development campus with a mixture of uses, including residential, commercial, office, industrial, and a large park.
- The Commercial Automotive District retains auto-oriented uses, such as vehicle sales, while emphasizing an overall cohesive image for the district.
- The General Plan locates several neighborhood centers with Flex District designations; each center is envisioned to contain a mix of uses, including neighborhood and local-serving commercial and residential uses. Development is envisioned to be pedestrian oriented.
- Greenway Corridors are envisioned as green streets with consistent street trees coverage that provide shade and a welcoming community image, with a connected sidewalk network, safe pedestrian crossings, separated or striped bikeways, where feasible, and bus transit. Higher-density housing and commercial uses are generally located along Greenway Corridors.

2.3.7 Land Use Designations

Figure 2-3, *Draft General Plan Land Use Diagram*, depicts 13 land use designations: Downtown Mixed Use, Business Residential Mixed Use, Corridor Mixed Use, General Commercial, Flex District, High Density Residential, Medium Density Residential, Low Density Residential, Heavy Industrial, Light Industrial, Utilities, Public/Institutional, and Park/Open Space. In addition to the base districts, overlay land use designation—Commercial Automotive District—is established and another overlay land use designation—Mobilehome Park Overlay District—may be established. Each of the land use designations are described in this section, with the legend on the General Plan Land Use Map having an abbreviated version of the descriptions.

The designations are meant to be broad enough to give the City flexibility in implementation, but clear enough to provide sufficient direction to carry out the General Plan. The Carson Municipal Code will contain more detailed provisions and standards. More than one zoning district may be consistent with a single General Plan land use designation. In addition to the listed allowable uses, public uses—including parks, government offices, police and fire stations, and public schools—are permitted in all classifications.



D:\770087.00 - City of Carson GPU_EIR\05 Graphics-GIS-Modeling

SOURCE: County of Los Angeles, 2017;
City of Carson, 2020; Dyett & Bhatia, 2021

Carson General Plan Update

Figure 2-3
Draft General Plan Land Use Diagram



Table 2-2, Standards for Density and Development Intensity for General Plan Land Use Designations, lists each land use designation established in the General Plan and its associated base density/intensity and potential maximum increase in density/intensity with inclusion of community benefits. Where for a residential or mixed-use designation both density and floor area ratio (FAR) are specified, development would need to comply with both. However, if a designation has only one of the two standards, then only that applies. For example, Low Density Residential has both an FAR and density standard, so new development will need to comply with both of these standards. Medium Density and High Density Residential only have a density standard, which means that there is not an FAR requirement that needs to be complied with.

**TABLE 2-2
STANDARDS FOR DENSITY AND DEVELOPMENT INTENSITY FOR GENERAL PLAN LAND USE DESIGNATIONS**

Land Use Designation	Base Density/Intensity			Maximum Increase in Residential Density/FAR with Additional Active Commercial Use/Community Benefits ²
	Base Residential Density ¹	Floor Area Ratio (FAR)		
		Minimum Active Ground Floor Commercial	All Uses Combined (residential and non-residential)	
Residential				
Low Density	up to 10	—	up to 0.55	—
Medium Density	10 to 18	—	None specified	20%
High Density	18 to 30 (18 to 40 for sites larger than two acres)	—	None specified	40%
Mixed Use				
Downtown Mixed Use	40 to 60	0.2	Up to 1.75 ³	40%
Corridor Mixed Use	up to 40	0.2	up to 1.0 ³	15%
Business Residential Mixed Use	up to 30	—	up to 0.75	60%
Flex District	up to 40 ⁴	—	Up to 0.75	60%
General Commercial District	No housing permitted	—	up to 0.5	—
Industrial				
Light Industrial	No housing permitted	—	up to 0.4	25%, up to 0.5
Heavy Industrial	No housing permitted	—	up to 0.6	25%, up to 0.75

NOTE: State-mandated density bonuses for affordable housing are in addition to densities otherwise permitted. The bonuses would be applied to the base density/intensity for the land use designation.

¹ Density is measured in housing units per net acre of site area, excluding portions of site not developable due to environmental or other constraints. Density is not typically tied to lot size; the High-Density classification is the exception.

² Method for determining additional commercial space/community benefits bonus to be established in the Carson Municipal Code. Bonus would be calculated on base density/FAR.

³ Building area devoted to active commercial uses at the ground level is exempt from FAR calculations.

⁴ Up to 60 units per acre allowed in the District at South Bay Specific Plan Area, with no additional density incentive for community benefits. State affordable housing bonuses still apply.

SOURCE: City of Carson, 2022. Chapter 2: Land Use and Revitalization. *Carson2040 General Plan*. Table 2-2. Prepared by Dyett and Bhatia.

Residential

Three residential land use designations are established to provide for development of a range of housing types. Residential density is expressed as housing units per net acre of developable parcel area (that is, excluding land that is constrained for development by public rights-of-way such as public streets, creeks, or other easements). Development would be required to be within the density range (both maximum and minimum) where stipulated in the designation; modification to standards with a use permit is allowed where unique site conditions prevent attainment of minimum densities. State-mandated bonuses for affordable and other housing are in addition to the permitted densities.

Low Density Residential (LDR)

Single-family residential development with density up to 10.0 units per acre. This classification is mainly intended for existing detached single-family dwellings, but attached single-family units may be permitted, provided each unit has ground-floor living area and private outdoor open space. The maximum FAR is 0.55.

Medium Density Residential (MDR)

Housing at densities 10.0 to 18.0 units per acre. Housing types would typically encompass single-family detached and attached (that is, townhouses), along with lower-density multifamily. A maximum increase in residential density of 20 percent is permitted with community benefits.

High Density Residential (HDR)

Residential development, with densities ranging from 18.0 to 30.0 units per acre for sites smaller than two acres in size, and up to 40.0 units per acre for sites larger than two acres. This designation is applied primarily to existing neighborhoods, and limited new development is expected in this designation. The designation would permit the full range of housing types, including multifamily, and is intended for specific areas where higher-density housing already exists or may be appropriate. Typically, taller building heights would be found in this designation. A maximum increase in residential density of 40 percent is permitted with community benefits.

Mobilehome Park Overlay District (MHD)

There is a growing housing crisis across the state, including within the city of Carson. A significant element of this crisis is the lack of affordable housing, including that provided by mobilehome parks. However, not only have the number of housing units provided by mobilehome parks within the city failed to keep up with population growth, but over time mobilehome parks have been closing and converting to other uses. This further exacerbates the housing crisis, especially for residents who need affordable housing options. To help maintain a sufficient supply of land for mobilehome parks and in order to help alleviate this component of the housing crisis, a Mobilehome Park Overlay District (MHD) may be created under the City's Zoning Ordinance. Because mobilehome parks are privately owned, the City has limited control over whether a park owner may choose to close a park. A primary purpose of the MHD is to help preserve the housing stock of existing mobilehome parks (as defined in the MHD), of which many residents qualify as affordable income residents under state law, and to help ensure a

sufficient supply of land for these types of uses and affordable income residents in the future, thus helping to mitigate both the state and local housing crisis.

The MHD Overlay Zone will apply to existing mobilehome parks (as may be defined in the MHD Overlay Zone) in the city. Mobilehome parks will be the only permitted use in the MHD Overlay Zone. Provisions of the MHD Overlay Zone shall be applied in addition to the regulations of the underlying zoning district. The zoning regulations shall collectively ensure that existing mobilehome parks are not redeveloped with another permitted use unless, as part of the new development, a discretionary zone change approval is granted (in addition to any other applicable land use entitlements) and comparable units at affordable housing rates are provided and made available to residents of the existing mobilehome park.

Commercial

General Commercial District (GCD)

This classification includes general and neighborhood commercial uses, including shopping centers and commercial uses adjacent to highways or some major corridors, where residential development may not be desirable. A range of commercial uses, including retail stores, eating and drinking establishments, commercial recreation, gas and service stations, automobile sales and repair services, financial, business and personal services and offices, motels, educational and social services is permitted. The Zoning Code may further distinguish between neighborhood, regional, or general commercial uses. The maximum FAR is 0.5.

Commercial Automotive District (CAD) Overlay

The Commercial Automotive District (CAD) overlay is used to promote a distinctive area of automobile sales facilities and other complementary retail uses as specified in the Zoning Code, with appealing landscaping, lighting, signage and compatible architectural elements.

Mixed Use

This designation is intended to accommodate high-intensity, active uses that encourage a mixture of land uses, ranging from commercial, retail, and office to multifamily residential development. Retail and department stores, eating and drinking establishments, hotels, commercial recreation, financial, business, personal services, residential, educational and social services, and office uses are permitted. Three mixed-use designations are established:

Downtown Mixed Use (DMU)

This classification is intended to promote a vibrant “main street”-like ambiance throughout the downtown Carson core, with mid-rise, mixed-use development. The ground floor frontage (with the exception of ingress and egress and other necessary building and site design considerations) of a site along Carson Street, Avalon Boulevard, and Del Amo Boulevard shall be devoted to active commercial uses; active commercial uses are those that are accessible to the general public, generate walk-in pedestrian clientele, and contribute to a high level of pedestrian activity. Such uses include retail shops, restaurants, bars, theaters and the performing arts, commercial recreation and entertainment, personal and convenience services, leasing offices, private recreational areas, fitness studios, party rooms, building and hotel lobbies, banks, travel agencies,

childcare services, libraries, museums, and galleries. Other parts of the site—at the ground level and at upper stories—may be devoted to commercial or residential uses.

The maximum base FAR is 1.75, and all active ground floor commercial use area is exempt from FAR calculation. The minimum residential density for projects comprising primarily residential use is 40 units per acre, maximum base residential density is 60 units per acre, and a minimum 0.2 FAR active ground floor commercial use is required; the City may permit substitution of required minimum commercial space with other desired uses or community benefits. Base FAR and base residential density may be increased by up to 40 percent, and maximum permitted heights increased proportionately up to maximum, with inclusion of additional (beyond minimum) active ground floor commercial use or community benefits or combination of the two, on a graduated scale as specified in the Zoning Ordinance. These increases are in addition to those permitted under state density bonus laws for affordable housing.

Development projects with an overall size of larger than 20 acres for which applications have been filed requesting a General Plan Amendment, and that change the existing land use designation to the Urban Residential land use designation of the 2004 General Plan and a corresponding Specific Plan zoning designation prior to the City’s adoption of the 2040 General Plan, shall be deemed consistent with the Downtown Mixed Use land use designation, provided that the project, following approval by the City, (i) does not exceed a residential density of 65 dwelling units per acre and/or an FAR of 2.4, (ii) the City approves a development agreement that identifies community benefits and affordable housing offered by the development to justify the 65 du/ac density, and (iii) the project provides at least minimum of 10,000 square feet of commercial space.

Policies in Chapter 2, *Land Use and Revitalization*, of the proposed General Plan update, provide additional provisions related to active ground floor use requirements, replacement commercial uses, and incentives for new active ground floor commercial uses.

Corridor Mixed Use (CMU)

This designation is applied to corridors where a mix of commercial and residential uses is permitted—although purely commercial or purely residential uses are allowed—to support retail and services that cater to the daily needs of local residents. Permitted uses include housing, retail, restaurants, personal services, public uses, and professional business offices. Mixed use may be in either a vertical format (multiple uses in the same building) or horizontal format (multiple single-use buildings on the same parcel). Other uses that are determined to be compatible with surrounding areas, including sensitive uses, would require a conditional use permit.

Typically, mid-rise building heights would be found in this designation. The maximum FAR is 1.0. Residential development up to 40 units per acre is permitted with provision of new or retention of existing 0.2 FAR minimum commercial space. Base FAR and base residential density may be increased by up to 15 percent with inclusion of additional (beyond minimum) active ground floor commercial use and/or community benefits, independent of increases permitted under state density bonus laws for affordable housing. Ground level active commercial uses are not included in FAR calculations, and the City may, in circumstances where ground floor

commercial use is not desirable or practical, permit substitution of commercial uses with community benefits.

Policies in Chapter 2, *Land Use and Revitalization*, of the proposed General Plan update, addresses provisions relating to existing (as of 2021) commercial development replacement.

Business Residential Mixed Use (BRMU)

This designation includes a range of non-nuisance light-industrial uses, eating and drinking establishments, offices, artist studios, live-work lofts, breweries, roasteries, and other uses compatible with residential areas, promoting development of an urban, walkable environment. Standalone retail uses and retail ancillary to industrial or residential uses are permitted, as well as free standing residential projects. If residential or other sensitive uses are proposed as part of redevelopment, both short-term and long-term compatibility with adjacent uses and location in a mixed light-industrial and industrial environment should be considered. Similarly, new industrial uses would need to be compatible (from noise, odor, air quality perspective) in a mixed residential/industrial environment and will have to comply with performance standards to contain noise or air impacts within the site so that it does not adversely affect surrounding development.

Uses that rely on heavy trucking, such as warehouse and distribution facilities, including logistic uses, are not permitted, and service and gas stations, and drive-through establishments are limited. In addition, the following uses will not be permitted: salvage yards, vehicle storage lots, major recycling facilities, truck yards, container yards, lay down yards, container parking, storage yards, truck terminals, self-storage and similar uses.

This designation is applied to sites at the western edge of the city proximate to I-405, west of Main Street adjacent to I-405, and the former Shell site. The maximum allowed FAR for all uses is 0.75 with a maximum residential density of 30 units per acre; these may be increased by up to 60 percent with provision of community benefits and would likely require mid- to low high-rise buildings with structured parking.

Flex District (FLX)

The Flex District designation permits a wide range of uses including offices, research, and development, light-industrial, hotels, local and regional retail commercial uses, commercial entertainment uses, and gas/charging stations in mid- and high-intensity settings, capitalizing on the visibility and regional access provided by I-405. The following uses will not be permitted in the Flex District: warehousing/distribution/logistics (or as otherwise permitted below), salvage yards, vehicle storage lots, major recycling facilities, truck yards, container yards, lay down yards, container parking, storage yards, truck terminals, self-storage and similar uses.

If residential or other sensitive uses are proposed as part of redevelopment, both short-term and long-term compatibility with adjacent uses and location in a mixed light-industrial and industrial environment should be considered. Similarly, new industrial uses would need to be compatible (from noise, odor, air quality perspective) in a mixed residential/industrial environment and will

have to comply with performance standards to contain noise or air impacts within the site so that it does not adversely affect surrounding development.

Warehouse and distribution facilities including logistic uses are only permitted (i) in properties south of Del Amo Boulevard and East of Main Streets, or (ii) where a property is subject to (a) an adopted Specific Plan that permits logistic uses following demonstrated good faith efforts to secure tax-generating uses or other City Council-desired uses, based on demonstrated milestones, and (b) as such demonstrated good faith efforts and milestones are documented in a Development Agreement approved by the City Council. Otherwise, only small-scale warehouse and distribution facilities are permitted with the size limited to approximately 30,000 square feet, with larger facilities subject to a Development Agreement. Residential uses are permitted conditionally unless approved through a Specific Plan, as part of a cohesive plan that considers the long-term development potential of adjacent properties and presents a strategy for transition of industrial uses to residential uses. Any new construction, or expansion of existing light or heavy industrial uses adjacent to sensitive uses must include buffered setback areas and/or appropriate mitigation to ensure compatibility.

The overall maximum FAR is 0.75, inclusive of all uses (residential and non-residential). A maximum base residential density of 40 units per acre is permitted in all areas of the Flex District, with the exception of the property located at the southeast corner of Main Street and Del Amo Boulevard (i.e., constituted approximately 15 acres within the 157-acre site), in which 60 units per acre shall be permitted. Base FAR and base residential density may be increased by up to 60 percent with inclusion of community benefits.

Industrial

Light Industrial (INL)

The Light Industrial designation is intended to provide for a wide variety of industrial uses and to limit those involving hazardous or nuisance effects as to be defined in the Zoning Code. Typical uses are manufacturing, research and development, and warehouse and distribution facilities including logistic uses. Commercial and retail uses are permitted with a conditional use permit, provided that this is not the predominant use. For sites that are over one acre, predominantly commercial uses are permitted.

Performance and development standards are intended to allow a wide range of uses as long as those uses will not adversely impact adjacent uses. The following uses will not be permitted: salvage yards, used vehicle storage lots, major recycling facilities, truck yards, container yards, lay down yards, container parking, storage yards, truck terminals, and similar uses. Self-storage and car storage lots would require a conditional use permit. The maximum allowable FAR is 0.4, or up to 0.5 with inclusion of community benefits. Any new construction, or expansion of existing light or heavy industrial uses adjacent to sensitive uses must include buffered setback areas and/or appropriate mitigation to ensure compatibility.

Heavy Industrial (INH)

The Heavy Industrial designation is intended to provide for the full range of industrial uses that are acceptable within the community, but whose operations are more intensive and may have nuisance or hazardous characteristics, which for reasons of health, safety, environmental effects, or general welfare, are best segregated from other uses. Extractive, primary processing, rail operations, and food processing industries are typical of this designation. Uses handling acutely or highly hazardous materials would be permitted only with proper safeguards and a conditional use permit. Outdoor storage operations may be permitted ancillary to primary use of site. The following uses are not permitted: truck yards, container yards, lay down yards, container parking, storage yards, used vehicle storage lots, major recycling facilities, or truck terminals. Self-storage and new car storage lots would require a conditional use permit.

The designation may contain a very limited amount of supportive retail and service uses when those uses are of a scale and design providing support only to the needs of businesses and their employees in the immediate industrial area. The maximum allowable FAR is 0.6 or up to 0.75 with inclusion of community benefits. Any new construction, or expansion of existing light or heavy industrial uses adjacent to sensitive uses must include buffered setback areas and/or appropriate mitigation to ensure compatibility.

Public and Open Space

Public and Institutional

The Public/Institutional land use category designates areas intended for public services, buildings, and related facilities, including schools and educational facilities, government facilities, and public utilities. This category also includes California State University, Dominguez Hills.

Parks/Open Space

This category includes public facilities developed for outdoor active or passive recreation, including parks, and linear trails/greenways such as along Dominguez Channel.

2.3.8 Building Heights

Building heights, along with other site development standards like setbacks, permitted uses, and lot size requirements, are provided in Carson Municipal Code. **Table 2-3, *Preliminary Range of Building Heights***, provides a preliminary range of typical building heights for the various land use designations. Heights and stories information shown in the table are for illustrative purposes; actual allowable maximum heights are established in the Zoning Code and may be higher or lower. Table 2-3 also outlines a height bonus which can be awarded to projects that provide certain community benefits.

**TABLE 2-3
PRELIMINARY RANGE OF BUILDING HEIGHTS (FOR ILLUSTRATIVE PURPOSES)**

Land Use Classification	Base Building Heights	Heights with inclusion of Additional Active Commercial Space/ Community Benefits
Residential		
Low Density	20 feet, 2 stories	N/A
Medium Density	30 feet, 2-3 stories	N/A
High Density	40 feet, 4 stories	60 feet, 6 stories
General Commercial District	40 feet, 1-3 stories	N/A
Mixed Use		
Downtown Mixed Use	55 feet, 5 stories	85 feet, 7-8 stories
Corridor Mixed Use	45 feet, 4 stories	65 feet, 6 stories
Business Residential Mixed Use	55 feet, 4 stories	65 feet, 6 stories (with up to 85 feet (7 or 8 stories) in portions of Shell site at least 500 feet away from adjacent residential uses)
Flex District	Industrial buildings: 55 feet, 2-5 stories Office and hotel buildings: 80 feet, 7 stories	Industrial buildings: None Office and hotel buildings: Between 100-140 feet, 10-14 stories depending on use
Industrial		
Light Industrial	45 feet, 1-2 stories	N/A
Heavy Industrial	Varies and specified in Zoning Code	N/A

¹ Building height and story information shown here is for illustrative purposes; actual allowable maximum heights are established in the Carson Zoning Code and may be higher or lower than shown in this table.

² The building heights are an absolute number, the number of stories will depend on individual projects. Industry standard assumption for ground floor with commercial is 15 feet tall, residential 10 feet tall, and office/hotel uses at 11 feet tall per story. Floor heights will vary depending on the project.

SOURCE: City of Carson, 2022. Chapter 2: Land Use and Revitalization. *Carson2040 General Plan*. Table 2-3. Prepared by Dyett and Bhatia.

2.4 Population, Employment, and Buildout

Carson's population and employment change through 2040 will be influenced by many factors, including regional growth trends, economic forces, local policies, and Carson's attractiveness to future residents and employers. The city's 2020 population is 93,100, and the total population of the Planning Area is approximately 98,000. Population in the city of Carson has increased by 145 percent since 1960 (before its incorporation in 1968), but its growth has slowed in recent years, with only a 1.5 percent (total) increase between 2010 and 2020 as seen in **Table 2-4, Population and Employment in the City of Carson**, partly due to the 2008 recession. In the same time period, Los Angeles County population has grown 3.6 percent, or more than twice as rapidly as Carson.

TABLE 2-4
POPULATION AND EMPLOYMENT IN THE CITY OF CARSON^{2,3}

	2000	2005	2010	2015	2020
Population	89,700	94,200	91,700	93,200	93,100
Employment	37,300	42,600	39,300	41,700	44,600
Jobs	52,300 ¹	51,800	49,800	56,100	58,500 ¹

¹ Available data for jobs is limited to 2002–2018. Values shown for 2000 and 2020 are from 2002 and 2018, respectively.

² Numbers shown in this table only include the city of Carson and do not include the sphere of influence.

³ Numbers are rounded to the nearest hundredth.

SOURCE: City of Carson, 2022. Chapter 2: Land Use and Revitalization. *Carson2040 General Plan*. Table 2-4. Prepared by Dyett and Bhatia.

In addition, employment in Carson has also fluctuated but has been increasing with a 17.6 percent growth in jobs between 2010 and 2018. In comparison, Los Angeles County as a whole experienced somewhat slower employment growth of 13.4 percent over this timeframe.

2.4.1 Projected Buildout

Buildout represents a reasonably foreseeable projection of the total number of residents, housing units, and jobs in the city in 2040 as a result of growth under the proposed General Plan update. Buildout estimates should be considered an estimate of growth but not considered a guarantee, as the actual amount of development that will occur through 2040 is based on many factors outside of the City’s control, including changes in regional real estate and labor markets and the decisions of individual property owners. Therefore, buildout projections represent one potential set of outcomes rather than definitive figures. Additionally, the designation of a site for a specific land use in the 2040 General Plan does not guarantee that the site will be developed or redeveloped at the assumed density/building intensity during the planning period, as future development will rely on each property owner’s initiative and on market forces.

Much of the city has already been developed, with many of the developable vacant sites already planned and several are contaminated and undergoing remediation. Thus, new development will result from a combination of development on sites currently vacant, and on the redevelopment of sites with existing uses. General Plan buildout projections are summarized in **Table 2-5**, *Potential 2040 Planning Area Buildout*.

**TABLE 2-5
POTENTIAL 2040 PLANNING AREA BUILDOUT**

	Existing		Net New		2040 Total	
	City Limits	SOI	City Limits	SOI	City Limits	SOI
Non-Residential Development (sf)						
Commercial	5,338,000	65,000	3,044,000	194,000	8,382,000	259,000
Office	4,127,000	825,000	2,098,000	87,000	6,225,000	912,000
Industrial	14,831,000	9,811,000	5,817,000	291,000	20,648,000	10,102,000
Total	24,296,000	10,701,000	10,959,000	572,000	35,255,000	11,273,000
Housing Units	26,710	1,700	13,690	40	40,400	1,740
Population	93,100	5,000	43,500	100	136,600	5,100
Jobs	58,600	19,000	18,000	900	76,600	19,900

NOTES: sf = square feet; SOI = sphere of influence.

SOURCE: City of Carson, 2022. Chapter 2: Land Use and Revitalization. *Carson2040 General Plan*. Table 2-4 Prepared by Dyett and Bhatia.

2.4.2 Residential Development

Table 2-5 presents potential residential development resulting from the application of assumed average densities/intensities for each land use designation shown on Figure 2-3. This calculation takes into consideration existing housing units as of 2020, pipeline projects (projects that are under construction, have been entitled, or are in the planning stage), and projected new housing units—derived by analyzing the maximum number of potential units that can be built under Euclidean planning against historical density growth patterns—in each land use designation.

An estimated 13,730 new housing units, including development in pipeline, are projected to be completed in Carson in the next 20 years, bringing the total number of housing units in the city to approximately 42,140. This new development is projected to accommodate an increase in population of 43,600, for a total buildout population of 141,700. Population increase in the SOI is projected to be modest—100 persons—with the majority of population growth anticipated to occur within the city limits.

2.4.3 Non-Residential Development

Table 2-5 also shows potential non-residential development in the Planning Area in terms of building square feet and potential jobs. This projection was conducted by calculating the square footage of non-residential construction that could be built on vacant or underutilized land. Jobs were calculated by applying an assumed job density factor (square feet of building area per job) for each use.

In total, about 11.5 million square feet of non-residential space, including pipeline development, is anticipated to be built in the Planning Area through 2040, for an increase of about 33 percent. The majority of new non-residential development is expected to take place in the city of Carson, where approximately 11 million square feet of space and 18,000 jobs from new development are estimated to be added, for a total of 35.2 million square feet and 76,600 jobs. Most of the new

square footage is the result of building new office, retail and commercial, manufacturing, and warehouse facilities on underutilized land. Retail commercial (which includes a variety of goods, services, and restaurants) is focused on new mixed-use designations in the city’s Core along east and west Carson Street and eventual redevelopment of the South Bay Pavilion. These projections reflect development of office and industrial square footage on brownfield sites—such as the Shell oil refinery and District at South Bay—and increase in intensities and flexibility on uses for Flex Districts, both of which could be used to accommodate the growth of the technological and healthcare industries. In the Planning Area as a whole, about 18,900 new jobs are projected at buildout, raising the total number of jobs from 77,600 in 2020 to approximately 96,500 in 2040.

2.5 Project Implementation

2.5.1 Intended Uses of the EIR

This EIR examines the potential environmental impacts of implementing the Project and identifies mitigation measures required to address significant impacts, as necessary. As no specific developments are proposed as part of the Project, this EIR is a programmatic EIR and does not evaluate the potential project-specific environmental impacts of individual development proposals that may be allowed under the Project subsequent to its adoption. Subsequent projects will be reviewed by the City for consistency with the Project and this EIR, and adequate project-level environmental review will be conducted as required under CEQA.

2.5.2 Tiering

For projects that are consistent with the General Plan, this EIR provides analysis for topics such as transportation and air quality, impacts for which are cumulative and citywide in nature. However, this EIR is a program-level EIR and does not evaluate the impacts of specific, individual developments that may be allowed under the proposed General Plan update. Specific future projects may require separate environmental review to address project-specific impacts, as required by CEQA, including when needed to secure the necessary discretionary development permits. Therefore, while subsequent environmental review may be tiered off this EIR,¹ this EIR is not intended to obviate the need for environmental review of individual projects or the need for site-specific assessments.

2.5.3 Required Permits and Approvals

The Project will require a recommendation from the Planning Commission and adoption by the City Council. Implementation of the Project will require additional regulatory actions by the City of Carson, including amendments to the Zoning Ordinance within the Carson Municipal Code to ensure consistency. Future, subsequent development under the Project may require approval of

¹ Section 15385 of the State CEQA Guidelines describes “tiering” as “the coverage of general matters in broader EIRs (such as on general plans or policy statements) with subsequent narrower EIRs or ultimately site-specific EIRs incorporating by reference the general discussions and concentrating solely on the issues specific to the EIR subsequently prepared.”

federal, state, and responsible or trustee agencies that may rely on this programmatic EIR for decisions in their areas of expertise.

2.5.4 Decision-Making Agencies

The Project sets high-level policies and goals to be used during the decision-making process when determining City priorities and during review of individual development proposals. Implementing the General Plan will involve the City Council, the Planning Commission, other City boards, committees and commissions, and City departments. The City also will need to consult with the County of Los Angeles and other public agencies about implementation proposals that affect their respective areas of jurisdiction. The principal responsibilities that City officials and staff have for Plan implementation are listed below; details on their powers and duties are in the Carson Municipal Code.

- City Council
- Planning Commission
- Community Development Department
- Public Works Department
- Community Services Department
- Carson Housing Authority
- Additional City advisory committees, boards, and commissions

2.5.5 Implementation Tools

The Proposed Project will be implemented through a variety of methods, including government programs initiated by the City, review of independent development proposals, standards established in the Zoning Ordinance and the Carson Municipal Code, decisions made by the various City commissions, departments, and the City Council, and the creation and implementation of specific plans. Additional project specific EIRs may be needed to look at site-specific environmental impacts in coordination with state and CEQA law.

CHAPTER 3

Environmental Setting, Impacts, and Mitigation Measures

3.0 Introduction to the Analysis

This Draft Environmental Impact Report (EIR) evaluates the potential physical environmental effects resulting from implementation of the Carson 2040 General Plan Update (Project). Some environmental issue areas that are typically considered under CEQA would not be affected by the Project and, pursuant to CEQA, are not further analyzed in this EIR. A discussion of those issues that were not further analyzed in the EIR can be found in Chapter 5, *Other CEQA Considerations*, of this EIR.

3.0.1 Definitions of Terms Used in the EIR

This EIR uses a number of terms that have specific meaning under CEQA. Among the most important of the terms used in the EIR are those that refer to the significance of environmental impacts. The following terms are used to describe environmental effects of the proposed General Plan update:

- **Significance Criteria:** A set of criteria used by the lead agency to determine at what level or threshold an impact would be considered significant. Standards of Significance used in this EIR include those standards provided in Appendix G of the State CEQA Guidelines. In determining the level of significance, the analysis assumes that the project would comply with relevant federal, state, and local regulations and ordinances.
- **Significant Impact:** A project impact is considered significant if the project would result in a substantial adverse change in the physical conditions of the environment. Significant impacts are identified by the evaluation of project-related physical change compared to specified significance criteria. A significant impact is defined 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.”¹
- **Potentially Significant Impact:** A potentially significant impact is identified where the proposed project may cause a substantial adverse change in the environment, depending on certain unknown conditions related to the project or the affected environment. For CEQA purposes, a potentially significant impact is treated as if it were a significant impact.
- **Less-than-Significant Impact:** A project impact is considered less than significant when the physical change caused by the proposed project would not exceed the applicable significance criterion.

¹ State CEQA Guidelines, Section 15382.

- **Significant and Unavoidable Impact:** A project impact is considered significant and unavoidable if it would result in a substantial adverse physical change in the environment that cannot be feasibly avoided or mitigated to a less-than-significant level.
- **Cumulative Impact:** Under CEQA, a cumulative impact refers to “two or more individual effects which, when considered together, are considerable or which compound or increase other environmental impacts.”² Like any other significant impact, a significant cumulative impact is one in which the cumulative adverse physical change would exceed the applicable significance criterion and the project’s contribution is “cumulatively considerable.”³
- **Mitigation Measure:** A mitigation measure is an action that could be taken that would avoid or reduce the magnitude of a significant impact. Section 15370 of the State CEQA Guidelines defines mitigation as:
 - a. Avoiding the impact altogether by not taking a certain action or parts of an action;
 - b. Minimizing impacts by limiting the degree of magnitude of the action and its implementation;
 - c. Rectifying the impact by repairing, rehabilitating, or restoring the affected environment;
 - d. Reducing or eliminating the impact over time by preservation and maintenance operations during the life of the action; and
 - e. Compensating for the impact by replacing or providing substitute resources or environments.

3.0.2 Section Format

Chapter 3 is divided into technical sections (e.g., Section 3.1, *Aesthetics*) that present for each environmental resource issue area the physical environmental setting, regulatory setting, significance criteria, methodology and assumptions, and impacts on the environment. Where required, potentially feasible mitigation measures are identified to lessen or avoid significant impacts. Each section includes an analysis of Project-specific and cumulative impacts for each issue area.

The technical environmental sections each begin with a description of the Project’s **environmental setting** and the **regulatory setting** as it pertains to a particular issue. The environmental setting provides a point of reference for assessing the environmental impacts of the Project and Project alternatives. The environmental setting discussion addresses the conditions that exist prior to implementation of the Project. This setting establishes the baseline by which the Project and Project alternatives are measured for environmental impacts. The regulatory setting presents relevant information about federal, state, regional, and/or local laws, regulations, plans or policies that pertain to the environmental resources addressed in each section.

Next, each section presents **significance criteria**, which identify the standards used by the City of Carson to determine the significance of effects of the Project. The significance criteria used for this analysis were derived from Appendix G of the State CEQA Guidelines.

A **methodology** description in each section presents the analytical methods used in the evaluation of effects of the Project, and is followed by an **impacts** and **mitigation** discussion. The impact

² State CEQA Guidelines, Section 15355.

³ State CEQA Guidelines, Section 15130(a).

and mitigation portion of each section includes impact statements, prefaced by a number in bold-faced type. An explanation of each impact is followed by an analysis of its significance. The subsection concludes with a statement that the impact, following implementation of the mitigation measure(s) and/or the continuation of existing policies and regulations, including the policies included in the proposed General Plan update, would be reduced to a less-than-significant level or would remain significant and unavoidable.

The analysis of environmental impacts considers both the construction and operation of future development associated with implementation of the Project. As required by section 15126.2(a) of the State CEQA Guidelines, direct, indirect, short-term, long-term, on-site, and/or off-site impacts are addressed, as appropriate, for the environmental issue area being analyzed. Under CEQA, economic or social changes by themselves are not considered to be significant impacts, but may be considered in linking the implementation of a Project to a physical environmental change, or in determining whether an impact is significant.

Where enforcement exists and compliance can be reasonably anticipated, this EIR assumes that the Project would meet the requirements of applicable laws and other regulations, including goals and policies included in the proposed General Plan update.

Mitigation measures pertinent to each individual impact, if available, appear after the impact discussion section. The magnitude of reduction of an impact and the potential effect of that reduction in magnitude on the significance of the impact is also disclosed. An example of the format is shown below.

Consistent with Section 15168 of the State CEQA Guidelines, this program EIR evaluates the broad policy direction of the Project, but does not examine the potential site-specific impacts of individual projects that may be proposed in the future that are consistent with the proposed General Plan update. Program EIRs play a key role in a “tiered” CEQA analysis. Individual projects under the Project will require project-level analysis at the time they are proposed based on the details of those projects and the existing conditions at the time such projects are pursued.

Impacts and Mitigation Measures

A discussion of the potential impact of the Project on the resource is provided in paragraph form. To identify impacts that may be site- or Project element-specific, where appropriate, the discussion differentiates between construction effects and operational effects. A statement of the level of significance before application of any mitigation measures is provided.

Mitigation Measure 4.X-1:

Recommended mitigation measure numbered in consecutive order. *OR*

Mitigation: None required.

Where appropriate, one or more potentially feasible mitigation measures are described. If necessary, a statement of the degree to which the available mitigation measure(s) would reduce the significance of the impact is included.

Cumulative Impacts

An analysis of cumulative impacts follows the Project-specific impacts and mitigation measures evaluation in each section. A cumulative impact consists of an impact that is created as a result of the combination of the Project evaluated in the EIR together with other past, present, and reasonably foreseeable projects causing related impacts.⁴

The beginning of the cumulative impact analysis in each technical section includes a description of the cumulative analysis methodology and the geographic or temporal context in which the cumulative impact is analyzed (e.g., the South Bay region of southern Los Angeles County, the South Coast Air Basin). In some instances, a Project-specific impact may be considered less than significant, but when considered in conjunction with other cumulative projects or activities may be considered significant or potentially significant.

As noted above, where a cumulative impact is significant when compared to existing or baseline conditions, the analysis must address whether the Project's contribution to the significant cumulative impact is "considerable." If the contribution of the Project is considerable, then the EIR must identify potentially feasible measures that could avoid or reduce the magnitude of the Project's contribution to a less-than-considerable level. If the Project's contribution is not considerable, it is considered less than significant and no mitigation of the Project contribution is required.⁵

The State CEQA Guidelines suggest that the analysis of cumulative impacts for each environmental factor can employ one of two methods to establish the effects of other past, current, and probable future projects. A lead agency may select a list of projects, including those outside the control of the agency, or alternatively, a summary of projections. These projections may be from an adopted general plan or related planning document, or from a prior environmental document that has been adopted or certified, and these documents may describe or evaluate regional or area-wide conditions contributing to the cumulative impact. The cumulative analysis presented in this document uses a projections-based approach.

⁴ State CEQA Guidelines Section 15355.

⁵ State CEQA Guidelines Section 15130(a)(3).

3.1 Aesthetics

3.1.1 Introduction

This section provides an analysis of potential local and regional environmental impacts on aesthetics from future development allowed under the Project, including those related to scenic vistas, scenic resources, visual character, and light and glare. The section provides context regarding the Planning Area's existing visual character and scenic resources, as well as relevant federal, state, and local regulations and programs.

No comments were received in response to the Notice of Preparation (NOP) and Recirculated NOP regarding aesthetics.

3.1.2 Environmental Setting

The city of Carson is located in a relatively flat area of the Los Angeles Basin, about two miles from the Pacific coast. Distant hills—including the Palos Verdes Hills about three miles to the southwest, the Santa Monica Mountains about 20 miles to the north, Puente Hills about 15 miles to the northeast, and Chino Hills about 20 miles to the east—contribute to the Planning Area's regional identity, while the city itself is dominantly developed with limited natural or scenic resources. The Planning Area's visual character stems largely from urban form, as discussed below.

Visual Character Overview

Most streets in Carson are oriented north-south and east-west in a grid pattern that defines much of Carson's overall structure. Several key streets or corridors form edges of neighborhoods and industrial districts. Freeways, including Interstate 405 (I-405) and State Route (SR)-91, form edges that delineate the city into north, middle, and south sections. Interstate 110 (I-110) and Interstate 710 (I-710) form city boundaries on the western and eastern sides of the city, respectively.

Within this framework of corridors and freeways, Carson mostly has a mix of industrial and residential uses. Most of the eastern portion of the city is industrial, though there are pockets of residential uses in this area. There are several landmarks throughout the city, including StubHub Center, California State University, Dominguez Hills, the Porsche Experience Center, the 168-acre specific plan area south of I-405 (currently known as The District at South Bay), and the SouthBay Pavilion mall. Carson Street, Main Street, and Avalon Boulevard are the most important commercial corridors in Carson. Carson Street is Carson's main commercial corridor and recently underwent streetscape improvements per the Carson Street Mixed-Use District Master Plan.

Other important corridors in Carson include Figueroa Street, Alameda Street, Wilmington Avenue, Del Amo Boulevard, and Sepulveda Boulevard. Each of these corridors contain industrial uses and often provides access to freeways and border residential neighborhoods. Del Amo and Sepulveda boulevards also contain a mix of land uses, including residential, industrial, and commercial land uses.

Urban form—including street patterns, lot size, lot shape, and building footprints—in Carson vary from neighborhood to neighborhood. This variation in urban form is due in part to the time in which neighborhoods were built. For instance, the neighborhood east of Alameda Street built prior to 1930 has a compact grid pattern with many intersections. Neighborhoods built after the 1930s in the southwest portion of the city and adjacent to California State University, Dominguez Hills tend to be more suburban in character, featuring curvilinear streets, cul-de-sacs, and lower residential densities.

Though there is great variety in neighborhood urban form in Carson, one commonality between neighborhoods is that they typically have similarly-defined edges. Neighborhood edges in Carson are most often formed by arterials, walls, and fences, and adjoining non-residential land uses. Arterials shape neighborhood edges because traffic and their width interrupt the flow of neighborhood form. Often, neighborhoods facing arterials are bordered by sound walls, visually distinguishing neighborhoods from others across arterials. On occasion, non-residential land uses border residential neighborhoods, creating neighborhood boundaries. A few neighborhoods in the city, including several of the mobile home parks and some recent development adjacent to California State University, Dominguez Hills have gated entryways and are only accessible to residents.

Scenic Resources

Open Spaces and Vacant Natural Areas

Although the Planning Area is primarily developed with industrial, residential, and commercial uses, there are some undeveloped open space areas, including parks, sports fields, The Links at Victoria Golf Course, and Lincoln Memorial Park Cemetery. Other undeveloped areas within the city include four large drainage channels—including the unnamed drainage south of Carson Harbor Village Mobile Home Park, Wilmington Drain, Dominguez Channel, and Compton Creek—and associated undeveloped areas, some of which include native and non-native woodland vegetation that may provide habitat for wildlife species, although most creeks are channelized and vegetation along them is sparse. Additionally, there are some undeveloped disturbed areas consisting of non-native grasslands and forbs, or areas that generally lack vegetation due to previous human disturbances. These vegetation communities include mixed riparian woodlands, non-native woodlands, open water, and non-native grasslands.

Light and Glare

Light and glare sources within the Planning Area are primarily associated with residential, commercial, and industrial land uses. In commercial and industrial areas, signage and parking lots may produce light. The light and glare that exist in these developed areas of the city are typical for an urban setting.

3.1.3 Regulatory Framework

This section provides the relevant state, regional, and local regulations applicable to the Project. There are no federal regulations that apply to the Project.

State

California Scenic Highways Program

Recognizing the value of scenic areas and the value of views from roads in such areas, the California State Legislature established the California Scenic Highway Program in 1963. This legislation sees scenic highways as "a vital part of the all-encompassing effort... to protect and enhance California's beauty, amenity and quality of life." Under this program, a number of state highways have been designated as eligible for inclusion as scenic routes. An eligible highway may change to an officially designated highway when the local jurisdiction adopts a scenic corridor protection program, applies to the California Department of Transportation (Caltrans) for scenic highway approval, and receives notification from Caltrans that the highway has been designated as a Scenic Highway. There are no adopted or eligible state scenic highways located in Carson.

Regional

Los Angeles County General Plan

The Los Angeles County General Plan applies to the unincorporated Sphere of Influence (SOI) of the Planning Area. The Los Angeles County General Plan Land Use Element outlines the County's Special Management Areas, or areas requiring additional development regulations to prevent the loss of life and property, and to protect the natural environment and important resources. Scenic Resources in the unincorporated areas of the County are regulated by Hillside Management Area (HMA) policies as well as the corresponding HMA Ordinance. The County's General Plan also protects ridgelines, scenic viewsheds, and areas along scenic highways. Scenic resources are addressed in greater detail in the Conservation and Natural Resources Element, which seeks to guide the long-term conservation of natural resources and preservation of available open space areas. Specific Scenic Resources policies include protecting ridgelines from incompatible development, encouraging development with a visual relationship to surrounding terrain and vegetation, and prohibiting outdoor advertising and billboards along scenic routes, corridors, and other scenic areas.

Local

Carson Municipal Code Section 9157.1 (Exterior Lighting)

Section 9157.1 of the Carson Municipal Code requires that all lighting of buildings, landscaping, parking lots, recreation areas and similar facilities shall be directed away from all adjoining and nearby residential property. Such lighting shall be arranged and controlled so as not to create a nuisance or hazard to traffic or to the living environment. This section is also applicable to arc lights, searchlights, and similar devices.

Carson Municipal Code Section 9126.9 (Site Planning and Design)

The design overlay in conjunction with a residential development is intended to "preserve areas of natural scenic beauty or of historical, cultural, or scientific interest. Approval of development plans shall also be subject to open space requirements which including preserving "areas of scenic or natural beauty forming a portion of the proposed development."

Carson Street Mixed-Use District Master Plan

The City of Carson (City) is implementing the Carson Street Mixed-Use District Master Plan to create “a distinct district along the Carson Street corridor with a ‘main street’ character, featuring a unique, pedestrian-friendly, mixed-use environment.” Proposed streetscape improvements include drought-tolerant vegetation, trees, LED lighting, seating areas for pedestrians, crosswalk enhancements, street furniture, way-finding signage, bicycle improvements, and gateway monuments. Many portions of West Carson Street, between I-110 and I-405, have been completed as of 2021.

3.1.4 Project Impact Analysis

Thresholds of Significance and Methodology

Thresholds of Significance

Appendix G of the State CEQA Guidelines provides screening questions that address potential impacts related to a number of environmental issues. The CEQA guidelines provides that lead agencies may use the questions set forth in the Appendix G to assess the significance of a project’s environmental effects, and the use of Appendix G as a significance threshold is routinely sanctioned by the courts (although such use is not mandatory). Based on the Appendix G questions regarding aesthetics, a project would have a significant impact if the project would:

- Threshold AES-1:** Have a substantial adverse effect on a scenic vista;
- Threshold AES-2:** Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway;
- Threshold AES-3:** In non-urbanized area, substantially degrade the existing visual character or quality of public views of the site and its surroundings. (Public views are those that are experienced from publicly accessible vantage point.) If the project is in an urbanized area, would the project conflict with applicable zoning and other regulations governing scenic quality; or
- Threshold AES-4:** Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area.

Methodology

Aesthetics and visual resources are generally subjective by nature, and therefore the level of the Project’s visual impact is difficult to quantify. As such, this analysis was conducted qualitatively, assessing potential implications of implementation of the proposed General Plan update on the existing visual character and scenic quality of the Planning Area. In addition, it is difficult to estimate the impact future development would have on scenic resources, since individual development projects can be designed to be compatible with and/or enhance the aesthetic quality of an area. As such, this analysis was based on the overall amount of new development at buildout of the Project, the potential location of new development, and policies in the proposed General Plan update.

Project Impact Analysis

Scenic Vistas

Threshold AES-1: The Project would have a significant impact if future development allowed by Carson2040 would have a substantial adverse effect on a scenic vista.

Impact AES-1: *The Project would not have a substantial adverse effect on a scenic vista. (Less than Significant)*

The proposed General Plan update would continue to regulate development and contains policies to ensure that opportunities to enjoy scenic views, parks, natural areas, and open space are either preserved or enhanced. Thus, as discussed below, substantial adverse effects are not expected to occur.

The proposed General Plan update introduces land use changes throughout the city. In most cases, the land use change sites are located in or near already developed areas and coincide with areas designated for development under the existing General Plan. By focusing development in infill areas, the proposed General Plan update relieves pressure to develop in open space and natural areas while filling visual gaps in existing neighborhoods. This allows for the preservation of open space views and the enhancement of urban views.

As noted in Section 3.1.2, *Environmental Setting*, the Planning Area is mainly characterized by urban environments, and as a result, scenic vistas are mostly limited to open space, vacant natural areas, and parks. The Project includes several policies pertaining to preserving these resources and their scenic qualities. Policies include context-specific design of new development and promoting infill development within Carson’s central core. Individual development projects will still be subject to development and planning review and must therefore conform to zoning and other ordinances regarding aesthetic qualities such as lighting, signage, landscaping, and building setbacks.

Due to the focus on infill development in the proposed General Plan update and policies that ensure that new development will have minimal impact on open spaces and other scenic resources, the impact of the Project on the city’s scenic vistas would be less than significant

Proposed General Plan Policies that Address the Impact

Land Use and Revitalization

Guiding Policies

- LUR-G-5 Provide opportunities for new residential development in a variety of settings, including through infill and redevelopment, without impacting existing neighborhoods or creating conflicts with industrial operations, while conserving mobile homes as much as possible, which provide more affordable housing.
- LUR-G-7 Develop Carson’s central Core—extending approximately 1.7 miles both east-west along West Carson Street and north-south along Avalon Boulevard and including the South Bay Pavilion—into a vibrant, pedestrian-oriented mixed-use hub of the community, with housing, retail, and other commercial uses, and civic uses and community gathering spaces.

Implementing Policies

LUR-P-18 Promote infill mixed-use development in either a vertical or horizontal configuration when aging shopping centers are redeveloped to create mixed-use corridors with a range of housing types at mid-to-high densities along their lengths and activity nodes at key intersections with retail/commercial uses to serve the daily needs of local residents.

This policy applies to areas that are designated as Corridor Mixed Use or Downtown Mixed Use, such as within the city's Core and Carson Plaza near the [California State University, Dominguez Hills] CSU-DH campus.

LUR-P-20 Require outdoor storage associated with use/building/business to be screened from any public view, including from adjacent streets as well as residential and commercial uses.

LUR-P-22 When industrial land directly adjacent to existing or permitted residential, parks, schools or other sensitive uses is developed or intensified, require a buffer of natural vegetation, open space, berms, and trees between the new residential development and industrial land. Other operation factors, including hours of operation, traffic, noise, and air quality impacts, shall be assessed and mitigated at time of project review.

Details of this would need to be developed as part of the Zoning Code. The buffer can help ameliorate visual impacts, and prevent reduce impacts related to light and glare, and potentially noise and air quality.

Community Character, Identity, and Design

Implementing Policies

CCD-P-8 Require buildings to provide a “front face” along Greenway Corridors by locating entryways, storefronts, and windows facing the street while locating elements like blank walls, parking lots, and storage areas away from the corridors.

CCD-P-21 Support an urban, walkable environment by incorporating the following strategies:

- a) Combine residential, commercial, and, when feasible, industrial uses as connected and integrated components of the district, rather than standalone uses.
- b) Consolidate parking into shared underground garages or structures to discourage large parking lots surrounding buildings.
- c) Present a cohesive face along public streets, rather than development being introverted.
- d) Ensure that building entrances and lobbies are visible and accessible from streets.
- e) Locate any industrial areas, parking lots, loading areas, and similar uses away from residential areas, streets, and pedestrianized areas.

CCD-P-28 Support an improved public realm for new residential and commercial development along East Carson Street by having a strong building to street interface, without requiring active frontages. Limit fences, blank walls, loading docks, and parking lots fronting Carson Street.

Open Space and Environmental Conservation

Guiding Policies

OSEC-G-1 Maintain a balanced and integrated open space system reflecting a variety of considerations—resource conservation, production of resources, recreation, and aesthetic and community identity—and ensuring synergies between various open space components and compatibility with land use planning.

OSEC-G-2 Seek opportunities for the restoration of natural open space during redevelopment of industrial or remediated landfills—including land currently used to produce resources—to create open space that supports outdoor recreation, protects public health and safety, and improves plant and animal habitat.

OSEC-G-3 Support efforts to improve the biodiversity of plant and animal habitats within Carson by creating natural habitat areas when feasible. Support efforts to restore channelized creeks to naturalized flows, with supportive open space development that promotes healthy riparian habitat.

OSEC-G-4 Recognize and support the preservation of wildlife migration routes and special status species that are state or federally listed as Endangered, Threatened, or Rare.

OSEC-G-5 Promote ecology and avian habitat creation by supporting a strong urban forest.

Implementing Policies

OSEC-P-4 Support reclamation of natural habitat in heavily disturbed locations, including closed landfills, channels, and when industrial areas are redeveloped, to improve the biodiversity of the city, increase resident’s access to nature and outdoor recreation, restore plant and animal habitat, and assist with environmental remediation.

This policy is intended to bring more greenery into the city and seeks to improve biological resources with reducing environmental impacts such as the heat island affect, improve air quality, assist with environmental remediation, and further environmental justice initiatives.

OSEC-P-5 Recognize the importance of the urban forest to the natural environment in Carson and support the expansion of the tree canopy on public and private property throughout the community. Undertake a program to increase Carson’s “urban forest”, with emphasis on planting street trees along Greenway Corridors and Boulevards, in mixed-use areas with greater concentration of pedestrians, and adjacent or close to freeways and along arterials with high truck traffic.

OSEC-P-6 Enhance tree health and the appearance of streets and other public spaces through regular maintenance as well as tree and landscape planting and care of the existing canopy.

OSEC-P-7 Provide ongoing education for property owners, businesses, and developers regarding landscape, maintenance and irrigation practices that promote habitat creation for wildlife species and improving the urban forest.

Mitigation Measures

None required.

Scenic Resources

Threshold AES-2: The Project would have a significant impact if future development allowed by Carson2040 would substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway.

***Impact AES-2:** The Project would not substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway. (No Impact)*

As discussed in Section 3.13, *Regulatory Framework*, no adopted or eligible state scenic highway is located in Carson. Given that no adopted or eligible state scenic highways are located within the Planning Area, and that policies of the proposed General Plan update will be policies that ensure that new development will have minimal impact on open spaces and other scenic resources, no impact would occur.

Proposed General Plan Policies that Address the Impact

Guiding Policies LUR-G-5, LUR-G-7, OSEC-G-1, OSEC-G-2, OSEC-G-3, OSEC-G-4, and OSEC-G-5, and Implementing Policies LUR-P-18, LUR-P-20, LUR-P-22, CCD-P-8, CCD-P-21, CCD-P-28, OSEC-P-4, OSEC-P-5, OSEC-P-6, and OSEC-P-7, as discussed under Impact AES-1.

Mitigation Measures

None required.

Consistency with Applicable Zoning and Regulations Governing Scenic Quality

Threshold AES-3: The Project would have a significant impact if future development allowed by Carson2040 would conflict with applicable zoning and other regulations governing scenic quality.

***Impact AES-3:** The Project would not result in development that would conflict with applicable zoning and other regulations governing scenic quality. (Less than Significant)*

The Planning Area consists of the city of Carson and portions of unincorporated Los Angeles County, which constitutes Carson's SOI. Zoning and other regulations governing scenic quality applicable to the city of Carson include Carson Municipal Code provisions relating to development review and subdivision design. Policies in the proposed General Plan update are intended to complement and further the intent of these provisions regulating scenic quality and resources and design guidelines, and any development occurring under the proposed General Plan

update would be subject to regulations in the Carson Municipal Code. For these reasons, the impact of the Project on scenic quality within the city would thus be less than significant.

The Project does not anticipate significant land use changes within the unincorporated SOI. Rather, proposed land use designations reflect existing uses and are generally intended to provide consistency with the proposed General Plan update in the event that land within the SOI is annexed into city limits. In addition, the Los Angeles County General Plan and Code of Ordinances contain provisions that would protect any scenic resources. The proposed General Plan update would therefore not substantially degrade the existing visual character or quality of public views of the SOI and its surroundings, and thus the impact of the Project on scenic quality within the SOI would be less than significant.

Proposed General Plan Policies that Address the Impact

Guiding Policies LUR-G-5, LUR-G-7, OSEC-G-1, OSEC-G-2, OSEC-G-3, OSEC-G-4, and OSEC-G-5, and Implementing Policies LUR-P-18, LUR-P-20, LUR-P-22, CCD-P-8, CCD-P-21, CCD-P-28, OSEC-P-4, OSEC-P-5, OSEC-P-6, and OSEC-P-7, as discussed under Impact AES-1.

Mitigation Measures

None required.

Light and Glare Impacts

Threshold AES-4: The Project would have a significant impact if future development allowed by Carson2040 would create a new source of substantial light or glare that would adversely affect day or nighttime views in the area.

Impact AES-4: *The Project would not create a new source of substantial light or glare that would adversely affect day or nighttime views in the area. (Less than Significant)*

New development resulting from implementation of the proposed General Plan update would necessitate the use of additional light fixtures and would contribute to existing conditions of light and glare. New light sources may include residential and non-residential interior and exterior lighting, parking lot lighting, commercial signage lighting, and lamps for streetscape and public recreational areas. Most new development resulting from the Project would take place in or near developed and urbanized areas, where moderate light and glare already exist, and would not be out of character with the urban environment. As described below, the proposed General Plan update includes policies related to buffering between development and sensitive habitats, and between new development and existing uses. Finally, the Carson Municipal Code contains provisions that would limit light and glare for new non-residential and residential development. With these measures in place, the impact of the Project with respect to light and glare would be less than significant.

Proposed General Plan Policies that Address the Impact

Land Use and Revitalization

Implementing Policies

LUR-P-22 When industrial land directly adjacent to existing or permitted residential, parks, schools or other sensitive uses is developed or intensified, require a buffer of natural vegetation, open space, berms, and trees between the new residential development and industrial land. Other operation factors, including hours of operation, traffic, noise, and air quality impacts, shall be assessed and mitigated at time of project review.

Details of this would need to be developed as part of the Zoning Code. The buffer can help ameliorate visual impacts, and prevent reduce impacts related to light and glare, and potentially noise and air quality.

Mitigation Measures

None required.

3.1.5 Cumulative Impact Analysis

The geographic context for cumulative visual impacts that would occur under the General Plan update is the Planning Area and those areas in the immediate vicinity of the city boundaries which are visible from or have a clear view of the city, including the Palos Verdes Hills to the southwest, the Santa Monica Mountains to the north, Puente Hills to the northeast, and Chino Hills to the east. However, the primary contributor to potential visual changes in and surrounding the city is the Project. There are no individual projects that are currently planned or in process that would represent such a significant portion of the visual changes that could occur in the immediate vicinity.

Reasonably foreseeable growth within the South Bay region of southern Los Angeles County, including Carson, could have cumulative effects on the region's aesthetic character, thus resulting in a significant cumulative impact. The Planning Area is characterized by industrial uses, residential neighborhoods, public facilities, and parks. Development to accommodate new residents and jobs may impact scenic vistas should it encroach on open hillsides in areas surrounding Carson. Various proposed policies ensure that scenic quality is maintained in Carson, including those that address open space preservation and sensitive transitions between new and existing development. Additionally, it is unlikely that significant growth will occur in Carson's SOI. Given such regulations, the contribution of the Project to a cumulative impact related to scenic vistas and visual character in a non-urbanized area would not be cumulatively considerable.

No state scenic highway is located within the South Bay region of southern Los Angeles County, including the Carson, and thus reasonably foreseeable growth within the South Bay region of southern central Los Angeles County, including Carson, would not substantially damage scenic resources within the corridor of a state scenic highway. No cumulative impact with respect to a state scenic highway would occur.

Existing development has already resulted in a cumulative increase in nighttime lighting within Carson and the surrounding area. The cumulative effect of this level of development has resulted in a cumulative loss of available nighttime views (i.e., cityscape or foothills). However, the contribution of the Project to this cumulative impact would not be cumulatively considerable as growth anticipated under the proposed General Plan update would comply with provisions of the Carson Municipal Code that regulate the placement of exterior lighting and adhere to proposed General Plan policies that mandate buffering between development and sensitive habitats, and between new development and existing uses.

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3.2 Air Quality

3.2.1 Introduction

This section provides an analysis of potential local and regional impacts on air quality from future development allowed under the Project, including those related to air quality plans and standards, criteria pollutants, sensitive receptors, and objectionable odors. This section provides context regarding air quality standards and local air quality, as well as relevant federal, state, and local regulations and programs. This section focuses on criteria air pollutants and toxic air contaminants; greenhouse gases (GHGs) are evaluated in Section 3.7, *Greenhouse Gas Emissions*, of this Draft EIR.

Comments received in response to the Notice of Preparation (NOP) and Recirculated NOP regarding topics covered in this section include the following:

- The California Department of Transportation (Caltrans) commented that the environmental report should ensure all modes are served well by planning and development activities including reducing single occupancy vehicle trips, reducing vehicle miles traveled, and reducing greenhouse gas emissions.
- The South Coast Air Quality Management District (SCAQMD) provided recommendations on the analysis of potential air quality impacts from the Project that should be included in the Draft Program Environmental Impact Report (EIR). Recommendations included the use of the SCAQMD’s CEQA Air Quality Handbook and website as guidance, the California Emissions Estimator Model (CalEEMod), evaluating regional and localized emissions mobile source health risks from project diesel emissions from long-term construction or projects that attract diesel-fueled vehicular trips, especially heavy-duty diesel-fueled vehicles. The SCAQMD also requested a copy of the Draft Program EIR upon its completion and public release directly to the SCAQMD including all appendices and technical documents and electronic versions of emission calculation spreadsheets and air quality modeling files.

3.2.2 Environmental Setting

Regional Context

Criteria Pollutants and Effects

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 the overall endeavor to prevent further deterioration and facilitate improvement in air quality. The following pollutants are regulated by the United States Environmental Protection Agency (USEPA) and are subject to emissions control requirements adopted by federal, state, and local regulatory agencies. These pollutants are referred to as “criteria air pollutants” as a result of the specific standards, or criteria, which have been adopted for them. National Ambient Air Quality Standards (NAAQS) and California Ambient Air Quality Standards (CAAQS) for each of the criteria air pollutants are summarized in **Table 3.2-1, *Ambient Air Quality Standards***. NAAQS and 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. A brief description of the health effects of these criteria air pollutants is provided below.

**TABLE 3.2-1
AMBIENT AIR QUALITY STANDARDS**

Pollutant	Average Time	California Standards ^a		National Standards ^b		
		Concentration ^c	Method ^d	Primary ^{c,e}	Secondary ^{c,f}	Method ^g
O ₃ ^h	1 Hour	0.09 ppm (180 µg/m ³)	Ultraviolet Photometry	—	Same as Primary Standard	Ultraviolet Photometry
	8 Hour	0.070 ppm (137 µg/m ³)		0.070 ppm (137 µg/m ³)		
NO ₂ ⁱ	1 Hour	180 ppb (339 µg/m ³)	Gas Phase Chemiluminescence	100 ppb	None	Gas Phase Chemiluminescence
	Annual Arithmetic Mean	30 ppb (57 µg/m ³)		53 ppb	Same as Primary Standard	
CO	1 Hour	20 ppm (23 mg/m ³)	Non-Dispersive Infrared Photometry (NDIR)	35 ppm (40 mg/m ³)	None	Non-Dispersive Infrared Photometry (NDIR)
	8 Hour	9.0 ppm (10mg/m ³)		9 ppm (10 mg/m ³)		
	8 Hour (Lake Tahoe)	6 ppm (7 mg/m ³)		—	—	
SO ₂ ^j	1 Hour	0.25 ppm (655 µg/m ³)	Ultraviolet Fluorescence	75 ppb (196 µg/m ³)	—	Ultraviolet Fluorescence; Spectrophotometry (Pararosaniline Method) ^g
	3 Hour	—		—	0.5 ppm (1300 µg/m ³)	
	24 Hour	0.04 ppm (105 µg/m ³)		0.14 ppm (for certain areas) ^j	—	
	Annual Arithmetic Mean	—		0.030 ppm (for certain areas) ^j	—	
PM10 ^k	24 Hour	50 µg/m ³	Gravimetric or Beta Attenuation	150 µg/m ³	Same as Primary Standard	Inertial Separation and Gravimetric Analysis
	Annual Arithmetic Mean	20 µg/m ³		—		
PM2.5 ^k	24 Hour	No Separate State Standard		35 µg/m ³	Same as Primary Standard	Inertial Separation and Gravimetric Analysis
	Annual Arithmetic Mean	12 µg/m ³	Gravimetric or Beta Attenuation	12.0 µg/m ^{3k}		
Lead ^{l,m}	30 Day Average	1.5 µg/m ³	Atomic Absorption	—	Same as Primary Standard	High Volume Sampler and Atomic Absorption
	Calendar Quarter	—		1.5 µg/m ³ (for certain areas) ^m		
	Rolling 3-Month Average ^m	—		0.15 µg/m ³		

Pollutant	Average Time	California Standards ^a		National Standards ^b		
		Concentration ^c	Method ^d	Primary ^{c,e}	Secondary ^{c,f}	Method ^g
Visibility Reducing Particles ⁿ	8 Hour	Extinction coefficient of 0.23 per kilometer—visibility of 10 miles or more (0.07–30 miles or more for Lake Tahoe) due to particles when relative humidity is less than 70 percent. Method: Beta Attenuation and Transmittance through Filter Tape.		No Federal Standards		
Sulfates (SO ₄)	24 Hour	25 µg/m ³	Ion Chromatography			
Hydrogen Sulfide	1 Hour	0.03 ppm (42 µg/m ³)	Ultraviolet Fluorescence			
Vinyl Chloride ^l	24 Hour	0.01 ppm (26 µg/m ³)	Gas Chromatography			

^a California standards for ozone, carbon monoxide (except 8-hour Lake Tahoe), sulfur dioxide (1 and 24 hour), nitrogen dioxide, and particulate matter (PM10, PM2.5, and visibility reducing particles), are values that are not to be exceeded. All others are not to be equaled or exceeded. California ambient air quality standards are listed in the Table of Standards in Section 70200 of Title 17 of the California Code of Regulations.

^b National standards (other than ozone, particulate matter, and those based on annual arithmetic mean) are not to be exceeded more than once a year. The ozone standard is attained when the fourth highest 8-hour concentration measured at each site in a year, averaged over three years, is equal to or less than the standard. For PM10, the 24-hour standard is attained when the expected number of days per calendar year with a 24-hour average concentration above 150 micrograms/per cubic meter (µg/m³) is equal to or less than one. For PM2.5, the 24-hour standard is attained when 98 percent of the daily concentrations, averaged over three years, are equal to or less than the standard.

^c Concentration expressed first in units in which it was promulgated. Equivalent units given in parentheses are based upon a reference temperature of 25°C and a reference pressure of 760 torr. Most measurements of air quality are to be corrected to a reference temperature of 25°C and a reference pressure of 760 torr; ppm in this table refers to ppm by volume, or micromoles of pollutant per mole of gas.

^d Any equivalent procedure which can be shown to the satisfaction of CARB to give equivalent results at or near the level of the air quality standard may be used.

^e National Primary Standards: The levels of air quality necessary, with an adequate margin of safety to protect the public health.

^f National Secondary Standards: The levels of air quality necessary to protect the public welfare from any known or anticipated adverse effects of a pollutant.

^g Reference method as described by the USEPA. An "equivalent method" of measurement may be used but must have a "consistent relationship to the reference method" and must be approved by the USEPA.

^h On October 1, 2015, the national 8-hour ozone primary and secondary standards were lowered from 0.075 to 0.070 ppm.

ⁱ To attain the 1-hour national standard, the 3-year average of the annual 98th percentile of the 1-hour daily maximum concentrations at each site must not exceed 100 ppb.

^j On June 2, 2010, a new 1-hour SO₂ standard was established and the existing 24-hour and annual primary standards were revoked. To attain the 1-hour national standard, the 3-year average of the annual 99th percentile of the 1-hour daily maximum concentrations at each site must not exceed 75 ppb. The 1971 SO₂ national standards (24-hour and annual) remain in effect until one year after an area is designated for the 2010 standard, except that in areas designated non-attainment for the 1971 standards, the 1971 standards remain in effect until implementation plans to attain or maintain the 2010 standards are approved.

^k On December 14, 2012, the national annual PM2.5 primary standard was lowered from 15 µg/m³ to 12.0 µg/m³.

^l CARB has identified lead and vinyl chloride as "toxic air contaminants" with no threshold level of exposure for adverse health effects determined. These actions allow for the implementation of control measures at levels below the ambient concentrations specified for these pollutants.

^m The national standard for lead was revised on October 15, 2008, to a rolling 3-month average. The 1978 lead standard (1.5 µg/m³ as a quarterly average) remains in effect until one year after an area is designated for the 2008 standard, except that in areas designated non-attainment for the 1978 standard, the 1978 standard remains in effect until implementation plans to attain or maintain the 2008 standard are approved.

ⁿ In 1989, CARB converted both the general statewide 10-mile visibility standard and the Lake Tahoe 30-mile visibility standard to instrumental equivalents, which are "extinction of 0.23 per kilometer" and "extinction of 0.07 per kilometer" for the statewide and Lake Tahoe Air Basin standards, respectively.

SOURCE: California Air Resources Board 2016a. Ambient Air Quality Standards (5/4/16), <http://www.arb.ca.gov/research/aaqs/aaqs2.pdf>. Accessed September 2021.

Ozone (O₃). Ozone is a secondary pollutant formed by the chemical reaction of volatile organic compounds (VOCs) and nitrogen oxides (NO_x) in the presence of sunlight under favorable meteorological conditions, such as high temperature and stagnation episodes. Ozone concentrations are generally highest during the summer months when direct sunlight, light wind, and warm temperature conditions are favorable. According to the USEPA, ozone can cause the muscles in the airways to constrict potentially leading to wheezing and shortness of breath.¹ Ozone can make it more difficult to breathe deeply and vigorously; cause shortness of breath and pain when taking a deep breath; cause coughing and sore or scratchy throat; inflame and damage the airways; aggravate lung diseases such as asthma, emphysema and chronic bronchitis; increase the frequency of asthma attacks; make the lungs more susceptible to infection; continue to damage the lungs even when the symptoms have disappeared; and cause chronic obstructive pulmonary disease.² Long-term exposure to ozone is linked to aggravation of asthma, and is likely to be one of many causes of asthma development and long-term exposures to higher concentrations of ozone may also be linked to permanent lung damage, such as abnormal lung development in children.³ According to the California Air Resource Board (CARB), inhalation of ozone causes inflammation and irritation of the tissues lining human airways, causing and worsening a variety of symptoms and exposure to ozone can reduce the volume of air that the lungs breathe in and cause shortness of breath.⁴

The USEPA states that people most at risk from breathing air containing ozone include people with asthma, children, older adults, and people who are active outdoors, especially outdoor workers.⁵ Children are at greatest risk from exposure to ozone because their lungs are still developing and they are more likely to be active outdoors when ozone levels are high, which increases their exposure.⁶ According to CARB, studies show that children are no more or less likely to suffer harmful effects than adults; however, children and teens may be more susceptible to ozone and other pollutants because they spend nearly twice as much time outdoors and engaged in vigorous activities compared to adults.⁷ Children breathe more rapidly than adults and inhale more pollution per pound of their body weight than adults and are less likely than adults to

¹ USEPA 2018a, United States Environmental Protection Agency, Health Effects of Ozone Pollution, <https://www.epa.gov/ground-level-ozone-pollution/health-effects-ozone-pollution>. Accessed September 2021.

² USEPA 2018a, United States Environmental Protection Agency, Health Effects of Ozone Pollution, <https://www.epa.gov/ground-level-ozone-pollution/health-effects-ozone-pollution>. Accessed September 2021.

³ USEPA 2018a, United States Environmental Protection Agency, Health Effects of Ozone Pollution, <https://www.epa.gov/ground-level-ozone-pollution/health-effects-ozone-pollution>. Accessed September 2021.

⁴ CARB 2018a, California Air Resources Board, Ozone & Health, Health Effects of Ozone, <https://ww2.arb.ca.gov/resources/ozone-and-health>. Accessed September 2021.

⁵ USEPA 2018a, United States Environmental Protection Agency, Health Effects of Ozone Pollution, <https://www.epa.gov/ground-level-ozone-pollution/health-effects-ozone-pollution>. Accessed September 2021.

⁶ USEPA 2018a, United States Environmental Protection Agency, Health Effects of Ozone Pollution, <https://www.epa.gov/ground-level-ozone-pollution/health-effects-ozone-pollution>. Accessed September 2021.

⁷ CARB 2018a, California Air Resources Board, Ozone & Health, Health Effects of Ozone, <https://ww2.arb.ca.gov/resources/ozone-and-health>. Accessed September 2021.

notice their own symptoms and avoid harmful exposures.⁸ Further research may be able to better distinguish between health effects in children and adults.⁹

Volatile Organic Compounds (VOCs). VOCs are organic chemical compounds of carbon and are not “criteria” pollutants themselves; however, in combination with NO_x they form ozone, and are regulated to prevent the formation of ozone.¹⁰ According to CARB, some VOCs are highly reactive and play a critical role in the formation of ozone, other VOCs have adverse health effects, and in some cases, VOCs can be both highly reactive and have adverse health effects.¹¹ 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.).¹²

Nitrogen Dioxide (NO₂) and Nitrogen Oxides (NO_x). NO_x is a term that refers to a group of compounds containing nitrogen and oxygen. The primary compounds of air quality concern include NO₂ and nitric oxide (NO). Ambient air quality standards have been promulgated for NO₂, which is a reddish-brown, reactive gas.¹³ The principle form of NO_x produced by combustion is NO, but NO reacts quickly in the atmosphere to form NO₂, creating the mixture of NO and NO₂ referred to as NO_x.¹⁴ Major sources of NO_x include emissions from cars, trucks and buses, power plants, and off-road equipment.¹⁵ The terms NO_x and NO₂ are sometimes used interchangeably. However, the term NO_x is typically used when discussing emissions, usually from combustion-related activities, and the term NO₂ is typically used when discussing ambient air quality standards. Where NO_x emissions are discussed in the context of the thresholds of significance or impact analyses, the discussions are based on the conservative assumption that all NO_x emissions would oxidize in the atmosphere to form NO₂.

According to the USEPA, short-term exposures to NO₂ can potentially aggravate respiratory diseases, particularly asthma, leading to respiratory symptoms (such as coughing, wheezing or difficulty breathing), hospital admissions and visits to emergency rooms while longer exposures to elevated concentrations of NO₂ may contribute to the development of asthma and potentially

⁸ CARB 2018a, California Air Resources Board, Ozone & Health, Health Effects of Ozone, <https://ww2.arb.ca.gov/resources/ozone-and-health>. Accessed September 2021.

⁹ CARB 2018a, California Air Resources Board, Ozone & Health, Health Effects of Ozone, <https://ww2.arb.ca.gov/resources/ozone-and-health>. Accessed September 2021.

¹⁰ USEPA 2017, United States Environmental Protection Agency, Technical Overview of Volatile Organic Compounds, <https://www.epa.gov/indoor-air-quality-iaq/technical-overview-volatile-organic-compounds>. Accessed September 2021.

¹¹ CARB 2016b, California Air Resources Board, Toxic Air Contaminants Monitoring, Volatile Organic Compounds, <https://www.arb.ca.gov/aaqm/toxics.htm>. Accessed September 2021.

¹² CARB 2016b, California Air Resources Board, Toxic Air Contaminants Monitoring, Volatile Organic Compounds, <https://www.arb.ca.gov/aaqm/toxics.htm>. Accessed September 2021.

¹³ CARB 2018b, California Air Resources Board, Nitrogen Dioxide & Health, <https://ww2.arb.ca.gov/resources/nitrogen-dioxide-and-health>. Accessed September 2021.

¹⁴ CARB 2018b, California Air Resources Board, Nitrogen Dioxide & Health, <https://ww2.arb.ca.gov/resources/nitrogen-dioxide-and-health>. Accessed September 2021.

¹⁵ USEPA 2018b, United States Environmental Protection Agency, Nitrogen Dioxide (NO₂) Pollution, <https://www.epa.gov/no2-pollution/basic-information-about-no2>. Accessed September 2021.

increase susceptibility to respiratory infections.¹⁶ According to CARB, controlled human exposure studies that show that NO₂ exposure can intensify responses to allergens in allergic asthmatics.¹⁷ In addition, a number of epidemiological studies have demonstrated associations between NO₂ exposure and premature death, cardiopulmonary effects, decreased lung function growth in children, respiratory symptoms, emergency room visits for asthma, and intensified allergic responses.¹⁸ Infants and children are particularly at risk from exposure to NO₂ because they have disproportionately higher exposure to NO₂ than adults due to their greater breathing rate for their body weight and their typically greater outdoor exposure duration while in adults, the greatest risk is to people who have chronic respiratory diseases, such as asthma and chronic obstructive pulmonary disease.¹⁹ CARB states that much of the information on distribution in air, human exposure and dose, and health effects is specifically for NO₂ and there is only limited information for NO and NO_x, as well as large uncertainty in relating health effects to NO or NO_x exposure.²⁰

Carbon Monoxide (CO): Carbon monoxide (CO) is primarily emitted from combustion processes and motor vehicles due to the incomplete combustion of fuel, such as natural gas, gasoline, or wood, with the majority of outdoor CO emissions from mobile sources.²¹ According to the USEPA, breathing air with a high concentration of CO reduces the amount of oxygen that can be transported in the blood stream to critical organs like the heart and brain and at very high levels, which are possible indoors or in other enclosed environments, CO can cause dizziness, confusion, unconsciousness and death.²² Very high levels of CO are not likely to occur outdoors; however, when CO levels are elevated outdoors, they can be of particular concern for people with some types of heart disease since these people already have a reduced ability for getting oxygenated blood to their hearts and are especially vulnerable to the effects of CO when exercising or under increased stress.²³ In these situations, short-term exposure to elevated CO may result in reduced oxygen to the heart accompanied by chest pain also known as angina.²⁴ According to CARB, the most common effects of CO exposure are fatigue, headaches, confusion,

¹⁶ USEPA 2018b, United States Environmental Protection Agency, Nitrogen Dioxide (NO₂) Pollution, <https://www.epa.gov/no2-pollution/basic-information-about-no2>. Accessed September 2021.

¹⁷ CARB 2018b, California Air Resources Board, Nitrogen Dioxide & Health, <https://ww2.arb.ca.gov/resources/nitrogen-dioxide-and-health>. Accessed September 2021.

¹⁸ CARB 2018b, California Air Resources Board, Nitrogen Dioxide & Health, <https://ww2.arb.ca.gov/resources/nitrogen-dioxide-and-health>. Accessed September 2021.

¹⁹ CARB 2018b, California Air Resources Board, Nitrogen Dioxide & Health, <https://ww2.arb.ca.gov/resources/nitrogen-dioxide-and-health>. Accessed September 2021.

²⁰ CARB 2018b, California Air Resources Board, Nitrogen Dioxide & Health, <https://ww2.arb.ca.gov/resources/nitrogen-dioxide-and-health>. Accessed September 2021.

²¹ CARB 2018c, California Air Resources Board, Carbon Monoxide & Health, <https://ww2.arb.ca.gov/resources/carbon-monoxide-and-health>. Accessed September 2021.

²² USEPA 2018c, United States Environmental Protection Agency, Carbon Monoxide (CO) Pollution in Outdoor Air, <https://www.epa.gov/co-pollution/basic-information-about-carbon-monoxide-co-outdoor-air-pollution>. Accessed September 2021.

²³ USEPA 2018c, United States Environmental Protection Agency, Carbon Monoxide (CO) Pollution in Outdoor Air, <https://www.epa.gov/co-pollution/basic-information-about-carbon-monoxide-co-outdoor-air-pollution>. Accessed September 2021.

²⁴ USEPA 2018c, United States Environmental Protection Agency, Carbon Monoxide (CO) Pollution in Outdoor Air, <https://www.epa.gov/co-pollution/basic-information-about-carbon-monoxide-co-outdoor-air-pollution>. Accessed September 2021.

and dizziness due to inadequate oxygen delivery to the brain.²⁵ For people with cardiovascular disease, short-term CO exposure can further reduce their body's already compromised ability to respond to the increased oxygen demands of exercise, exertion, or stress; inadequate oxygen delivery to the heart muscle leads to chest pain and decreased exercise tolerance.²⁶ Unborn babies, infants, elderly people, and people with anemia or with a history of heart or respiratory disease are most likely to experience health effects with exposure to elevated levels of CO.²⁷

Sulfur Dioxide (SO₂). According to the USEPA, the largest source of sulfur dioxide (SO₂) emissions in the atmosphere is the burning of fossil fuels by power plants and other industrial facilities while smaller sources of SO₂ emissions include industrial processes such as extracting metal from ore; natural sources such as volcanoes; and locomotives, ships and other vehicles and heavy equipment that burn fuel with a high sulfur content.²⁸ In 2006, California phased-in the ultra-low-sulfur diesel regulation limiting vehicle diesel fuel to a sulfur content not exceeding 15 parts per million (ppm), down from the previous requirement of 500 ppm, substantially reducing emissions of sulfur from diesel combustion.²⁹ According to the USEPA, short-term exposures to SO₂ can harm the human respiratory system and make breathing difficult.³⁰ According to CARB, health effects at levels near the state 1-hour standard are those of asthma exacerbation, including bronchoconstriction accompanied by symptoms of respiratory irritation such as wheezing, shortness of breath and chest tightness, especially during exercise or physical activity and exposure at elevated levels of SO₂ (above 1 ppm) results in increased incidence of pulmonary symptoms and disease, decreased pulmonary function, and increased risk of mortality.³¹ Children, the elderly, and those with asthma, cardiovascular disease, or chronic lung disease (such as bronchitis or emphysema) are most likely to experience the adverse effects of SO₂.^{32,33}

Particulate Matter (PM₁₀ and PM_{2.5}). Particulate matter air pollution is a mixture of solid particles and liquid droplets found in the air.³⁴ Some particles, such as dust, dirt, soot, or smoke, are large or dark enough to be seen with the naked eye while other particles are so small they can

²⁵ CARB 2018c, California Air Resources Board, Carbon Monoxide & Health, <https://ww2.arb.ca.gov/resources/carbon-monoxide-and-health>. Accessed September 2021.

²⁶ CARB 2018c, California Air Resources Board, Carbon Monoxide & Health, <https://ww2.arb.ca.gov/resources/carbon-monoxide-and-health>. Accessed September 2021.

²⁷ CARB 2018c, California Air Resources Board, Carbon Monoxide & Health, <https://ww2.arb.ca.gov/resources/carbon-monoxide-and-health>. Accessed September 2021.

²⁸ USEPA 2018d, United States Environmental Protection Agency, Sulfur Dioxide (SO₂) Pollution, <https://www.epa.gov/so2-pollution/sulfur-dioxide-basics#effects>. Accessed September 2021.

²⁹ CARB 2004, California Air Resources Board, Final Regulation Order, Amendments to the California Diesel Fuel Regulations, Amend Section 2281, Title 13, California Code of Regulations, <https://www.arb.ca.gov/regact/ulsd2003/fro2.pdf>. Accessed September 2021.

³⁰ USEPA 2018d, United States Environmental Protection Agency, Sulfur Dioxide (SO₂) Pollution, <https://www.epa.gov/so2-pollution/sulfur-dioxide-basics#effects>. Accessed September 2021.

³¹ CARB 2018d, California Air Resources Board, Sulfur Dioxide & Health, <https://ww2.arb.ca.gov/resources/sulfur-dioxide-and-health>. Accessed September 2021.

³² CARB 2018d, California Air Resources Board, Sulfur Dioxide & Health, <https://ww2.arb.ca.gov/resources/sulfur-dioxide-and-health>. Accessed September 2021.

³³ USEPA 2018d, United States Environmental Protection Agency, Sulfur Dioxide (SO₂) Pollution, <https://www.epa.gov/so2-pollution/sulfur-dioxide-basics#effects>. Accessed September 2021.

³⁴ USEPA 2018e, United States Environmental Protection Agency, Particulate Matter (PM) Pollution, <https://www.epa.gov/pm-pollution/particulate-matter-pm-basics>. Accessed September 2021.

only be detected using an electron microscope.³⁵ Particles are defined by their diameter for air quality regulatory purposes: inhalable particles with diameters that are generally 10 micrometers and smaller (PM10); and fine inhalable particles with diameters that are generally 2.5 micrometers and smaller (PM2.5).³⁶ Thus, PM2.5 comprises a portion or a subset of PM10. Sources of PM10 emissions include dust from construction sites, landfills and agriculture, wildfires and brush/waste burning, industrial sources, and wind-blown dust from open lands.³⁷ Sources of PM2.5 emissions include combustion of gasoline, oil, diesel fuel, or wood.³⁸ PM10 and PM2.5 may be either directly emitted from sources (primary particles) or formed in the atmosphere through chemical reactions of gases (secondary particles) such as SO₂, NO_x, and certain organic compounds.³⁹ According to CARB, both PM10 and PM2.5 can be inhaled, with some depositing throughout the airways; PM10 is more likely to deposit on the surfaces of the larger airways of the upper region of the lung while PM2.5 is more likely to travel into and deposit on the surface of the deeper parts of the lung, which can induce tissue damage, and lung inflammation.⁴⁰ Short-term (up to 24 hours duration) exposure to PM10 has been associated primarily with worsening of respiratory diseases, including asthma and chronic obstructive pulmonary disease, leading to hospitalization and emergency department visits.⁴¹ The effects of long-term (months or years) exposure to PM10 are less clear, although studies suggest a link between long-term PM10 exposure and respiratory mortality. The International Agency for Research on Cancer published a review in 2015 that concluded that particulate matter in outdoor air pollution causes lung cancer.⁴² Short-term exposure to PM2.5 has been associated with premature mortality, increased hospital admissions for heart or lung causes, acute and chronic bronchitis, asthma attacks, emergency room visits, respiratory symptoms, and restricted activity days and long-term exposure to PM2.5 has been linked to premature death, particularly in people who have chronic heart or lung diseases, and reduced lung function growth in children.⁴³ According to CARB, populations most likely to experience adverse health effects with exposure to PM10 and PM2.5 include older adults with chronic heart or lung disease, children, and asthmatics and children and infants are more susceptible to harm from inhaling pollutants such as

³⁵ USEPA 2018e, United States Environmental Protection Agency, Particulate Matter (PM) Pollution, <https://www.epa.gov/pm-pollution/particulate-matter-pm-basics>. Accessed September 2021.

³⁶ USEPA 2018e, United States Environmental Protection Agency, Particulate Matter (PM) Pollution, <https://www.epa.gov/pm-pollution/particulate-matter-pm-basics>. Accessed September 2021.

³⁷ CARB 2017a, California Air Resources Board, Inhalable Particulate Matter and Health (PM2.5 and PM10), <https://www.arb.ca.gov/research/aaqs/common-pollutants/pm/pm.htm>. Accessed September 2021.

³⁸ CARB 2017a, California Air Resources Board, Inhalable Particulate Matter and Health (PM2.5 and PM10), <https://www.arb.ca.gov/research/aaqs/common-pollutants/pm/pm.htm>. Accessed September 2021.

³⁹ CARB 2017a, California Air Resources Board, Inhalable Particulate Matter and Health (PM2.5 and PM10), <https://www.arb.ca.gov/research/aaqs/common-pollutants/pm/pm.htm>. Accessed September 2021.

⁴⁰ CARB 2017a, California Air Resources Board, Inhalable Particulate Matter and Health (PM2.5 and PM10), <https://www.arb.ca.gov/research/aaqs/common-pollutants/pm/pm.htm>. Accessed September 2021.

⁴¹ CARB 2017a, California Air Resources Board, Inhalable Particulate Matter and Health (PM2.5 and PM10), <https://www.arb.ca.gov/research/aaqs/common-pollutants/pm/pm.htm>. Accessed September 2021.

⁴² CARB 2017a, California Air Resources Board, Inhalable Particulate Matter and Health (PM2.5 and PM10), <https://www.arb.ca.gov/research/aaqs/common-pollutants/pm/pm.htm>. Accessed September 2021.

⁴³ CARB 2017a, California Air Resources Board, Inhalable Particulate Matter and Health (PM2.5 and PM10), <https://www.arb.ca.gov/research/aaqs/common-pollutants/pm/pm.htm>. Accessed September 2021.

PM10 and PM2.5 compared to healthy adults because they inhale more air per pound of body weight than do adults, spend more time outdoors, and have developing immune systems.⁴⁴

Lead (Pb). Major sources of lead emissions include ore and metals processing, piston-engine aircraft operating on leaded aviation fuel, waste incinerators, utilities, and lead-acid battery manufacturers.⁴⁵ In the past, leaded gasoline was a major source of lead emissions; however, the removal of lead from gasoline has resulted in a decrease of lead in the air by 98 percent between 1980 and 2014.⁴⁶ Lead can adversely affect the nervous system, kidney function, immune system, reproductive and developmental systems and the cardiovascular system, and affects the oxygen carrying capacity of blood.⁴⁷ The lead effects most commonly encountered in current populations are neurological effects in children, such as behavioral problems and reduced intelligence, anemia, and liver or kidney damage.⁴⁸ Excessive lead exposure in adults can cause reproductive problems in men and women, high blood pressure, kidney disease, digestive problems, nerve disorders, memory and concentration problems, and muscle and joint pain.⁴⁹

Existing Criteria Pollutants Levels at Nearby Monitoring Stations

The South Coast Air Quality Management District (SCAQMD) maintains a network of air quality monitoring stations located throughout the South Coast Air Basin (SCAB) to measure ambient pollutant concentrations. The City is primarily located in SCAQMD Source Receptor Area (SRA) 4 (South Los Angeles County Coastal) with the north portion of the City north of State Route 91 located in SCAQMD SRA 12 (South Central Los Angeles County). The monitoring stations representative of the ambient air quality conditions in the City are the South Los Angeles County Coastal Monitoring Stations 039, 072, 077, and 033 in SRA 4 and the South Central Los Angeles County Monitoring Station 112 in SRA 12. Station 039 collects monitored data for ozone and NO₂. Station 072 collects monitored data for PM2.5, Station 077 collects monitored data for PM10, PM2.5 and lead, and Station 033 collects monitored data for CO, SO₂ and PM10. Where data is not available for Station 039, monitoring data from Station 072, Station 077, and Station 033 are listed. Where multiple stations in SRA 4 monitor the same pollutant, the maximum monitored level is reported. Station 112 collects data for ozone, NO₂, CO, PM2.5 and lead. Data from the near-road Station 032, located near Interstate 710, are not included as it is not representative of ambient area conditions.

The most recent data available from SCAQMD for these monitoring stations are from years 2017 to 2020. The pollutant concentration data for these years are summarized in **Table 3.2-2, Air**

⁴⁴ CARB 2017a, California Air Resources Board, Inhalable Particulate Matter and Health (PM2.5 and PM10), <https://www.arb.ca.gov/research/aaqs/common-pollutants/pm/pm.htm>. Accessed September 2021.

⁴⁵ USEPA 2018f, United States Environmental Protection Agency, Lead Air Pollution, <https://www.epa.gov/lead-air-pollution/basic-information-about-lead-air-pollution>, last updated November 29, 2017. Accessed September 2021.

⁴⁶ USEPA 2018f, United States Environmental Protection Agency, Lead Air Pollution, <https://www.epa.gov/lead-air-pollution/basic-information-about-lead-air-pollution>, last updated November 29, 2017. Accessed September 2021.

⁴⁷ USEPA 2018f, United States Environmental Protection Agency, Lead Air Pollution, <https://www.epa.gov/lead-air-pollution/basic-information-about-lead-air-pollution>, last updated November 29, 2017. Accessed September 2021.

⁴⁸ CARB 2018e, California Air Resources Board, Lead & Health, <https://ww2.arb.ca.gov/resources/lead-and-health>. Accessed September 2021.

⁴⁹ CARB 2018e, California Air Resources Board, Lead & Health, <https://ww2.arb.ca.gov/resources/lead-and-health>. Accessed September 2021.

Pollutant Standards and Ambient Air Quality Data – SRA 4, and **Table 3.2-3, Air Pollutant Standards and Ambient Air Quality Data – SRA 12**. As shown, ambient concentrations have remained relatively consistent between 2017 and 2020, with ozone trending higher in more recent years and NO₂, CO, and PM_{2.5} trending lower in more recent years.

**TABLE 3.2-2
 AIR POLLUTANT STANDARDS AND AMBIENT AIR QUALITY DATA – SRA 4**

Pollutant/Standard	2017	2018	2019	2020
Ozone, O₃ (1-hour)				
Maximum Concentration (ppm)	0.082	0.074	0.074	0.105
Days > CAAQS (0.09 ppm)	0	0	0	0
Ozone, O₃ (8-hour)				
Maximum Concentration (ppm)	0.068	0.063	0.064	0.083
4th High 8-hour Concentration (ppm)	0.062	0.053	0.055	0.071
Days > CAAQS (0.070 ppm)	0	0	0	4
Days > NAAQS (0.070 ppm)	0	0	0	4
Nitrogen Dioxide, NO₂ (1-hour)				
Maximum Concentration (ppm)	0.090	0.085	0.072	0.075
Days > CAAQS (0.18 ppm)	0	0	0	0
98th Percentile Concentration (ppm)	0.073	0.063	0.056	0.056
Days > NAAQS (0.100 ppm)	0	0	0	0
Nitrogen Dioxide, NO₂ (Annual)				
Annual Arithmetic Mean (0.030 ppm)	0.018	0.017	0.016	0.013
Carbon Monoxide, CO (1-hour)				
Maximum Concentration (ppm)	3.9	4.7	3.0	— ^a
Days > CAAQS (20 ppm)	0	0	0	0
Days > NAAQS (35 ppm)	0	0	0	0
Carbon Monoxide, CO (8-hour)				
Maximum Concentration (ppm)	2.6	2.1	2.1	— ^a
Days > CAAQS (9.0 ppm)	0	0	0	0
Days > NAAQS (9 ppm)	0	0	0	0
Sulfur Dioxide, SO₂ (1-hour)				
Maximum Concentration (ppm)	0.020	0.011	0.009	— ^a
Days > CAAQS (0.25 ppm)	0	0	0	0
99th Percentile Concentration (ppm)	0.014	0.009	0.008	0.009
Days > NAAQS (0.075 ppm)	0	0	0	0
Respirable Particulate Matter, PM₁₀ (24-hour)				
Maximum Concentration (µg/m ³)	57	84	74	59
Samples > CAAQS (50 µg/m ³)	9	4	3	2
Samples > NAAQS (150 µg/m ³)	0	0	0	0

Pollutant/Standard	2017	2018	2019	2020
Respirable Particulate Matter, PM10 (Annual)				
Annual Arithmetic Mean (20 µg/m ³)	33.3	32.3	26.9	27.8
Fine Particulate Matter, PM2.5 (24-hour)				
Maximum Concentration (µg/m ³)	56.3	47.1	30.6	39.0
98th Percentile Concentration (µg/m ³)	31.1	29.8	23.2	28.0
Samples > NAAQS (35 µg/m ³)	5	2	0	1
Fine Particulate Matter, PM2.5 (Annual)				
Annual Arithmetic Mean (12 µg/m ³)	11.02	11.15	9.23	11.38
Lead				
Maximum 30-day average (µg/m ³)	0.010	0.006	0.006	0.008
Samples > CAAQS (1.5 µg/m ³)	0	0	0	0
Maximum 3-month rolling average (µg/m ³)	0.001	0.007	0.005	0.006
Days > NAAQS (0.15 µg/m ³)	0	0	0	0

NOTES: SRA = Source Receptor Area; ppm = parts per million; µg/m³ = micrograms per cubic meter

^a Criteria pollutants were not measured at the receptor area location during this year.

SOURCE: South Coast Air Quality Management District, n.d., Historical Data by Year, <http://www.aqmd.gov/home/air-quality/air-quality-data-studies/historical-data-by-year>.

**TABLE 3.2-3
POLLUTANT STANDARDS AND AMBIENT AIR QUALITY DATA – SRA 12**

Pollutant/Standard	2017	2018	2019	2020
Ozone, O₃ (1-hour)				
Maximum Concentration (ppm)	0.092	0.075	0.100	0.152
Days > CAAQS (0.09 ppm)	0	0	1	3
Ozone, O₃ (8-hour)				
Maximum Concentration (ppm)	0.076	0.063	0.079	0.115
4th High 8-hour Concentration (ppm)	0.073	0.058	0.064	0.072
Days > CAAQS (0.070 ppm)	5	0	1	4
Days > NAAQS (0.070 ppm)	5	0	1	4
Nitrogen Dioxide, NO₂ (1-hour)				
Maximum Concentration (ppm)	0.099	0.068	0.070	0.072
Days > CAAQS (0.18 ppm)	0	0	0	0
98th Percentile Concentration (ppm)	0.067	0.056	0.053	0.061
Days > NAAQS (0.100 ppm)	0	0	0	0
Nitrogen Dioxide, NO₂ (Annual)				
Annual Arithmetic Mean (0.030 ppm)	0.016	0.015	0.014	0.015

Pollutant/Standard	2017	2018	2019	2020
Carbon Monoxide, CO (1-hour)				
Maximum Concentration (ppm)	6.1	4.7	3.8	4.5
Days > CAAQS (20 ppm)	0	0	0	0
Days > NAAQS (35 ppm)	0	0	0	0
Carbon Monoxide, CO (8-hour)				
Maximum Concentration (ppm)	4.6	3.5	3.2	3.1
Days > CAAQS (9.0 ppm)	0	0	0	0
Days > NAAQS (9 ppm)	0	0	0	0
Fine Particulate Matter, PM2.5 (24-hour)				
Maximum Concentration ($\mu\text{g}/\text{m}^3$)	66.7	43.0	39.5	43.2
98th Percentile Concentration ($\mu\text{g}/\text{m}^3$)	41.3	34.2	26.6	34.1
Samples > NAAQS (35 $\mu\text{g}/\text{m}^3$)	4	1	1	7
Fine Particulate Matter, PM2.5 (Annual)				
Annual Arithmetic Mean (12 $\mu\text{g}/\text{m}^3$)	12.92	12.96	10.87	13.57
Lead				
Maximum 30-day average ($\mu\text{g}/\text{m}^3$)	0.016	0.009	0.009	0.010
Samples > CAAQS (1.5 $\mu\text{g}/\text{m}^3$)	0	0	0	0
Maximum 3-month rolling average ($\mu\text{g}/\text{m}^3$)	0.01	0.01	0.007	0.009
Days > NAAQS (0.15 $\mu\text{g}/\text{m}^3$)	0	0	0	0

NOTES: SRA = Source Receptor Area; ppm = parts per million; $\mu\text{g}/\text{m}^3$ = micrograms per cubic meter

SOURCE: South Coast Air Quality Management District, n.d. Historical Data by Year, <http://www.aqmd.gov/home/air-quality/air-quality-data-studies/historical-data-by-year>.

Toxics Air Contaminants

In addition to criteria pollutants, the SCAQMD periodically assesses levels of toxic air contaminants (TACs) in the Air Basin. A TAC is defined by California Health and Safety Code Section 39655 as an air pollutant which may cause or contribute to an increase in mortality or in serious illness, or which may pose a present or potential hazard to human health. A substance that is listed as a hazardous air pollutant pursuant to subsection (b) of Section 112 of the federal act (42 U.S.C. Sec. 7412(b)) is a toxic air contaminant. CARB has listed approximately 200 toxic substances, including diesel particulate matter, which are identified on the California Air Toxics Program’s TAC List. TACs are not classified as “criteria” air pollutants. The effects of TACs can be diverse and their health impacts 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 non-cancer exposure levels.

The SCAQMD periodically assesses levels of TACs in the Air Basin. In August 2021, the SCAQMD released the Final Multiple Air Toxics Exposure Study V (MATES V).⁵⁰ The MATES V study includes a fixed site monitoring program with 10 stations, an updated emissions inventory of TACs, and a modeling effort to characterize risk across the Air Basin. The purpose of the fixed site monitoring is to characterize long-term regional air toxics levels in residential and commercial areas. In addition to new measurements and updated modeling results, several key updates were implemented in MATES V. First, MATES V estimates cancer risks by taking into account multiple exposure pathways, which includes inhalation and non-inhalation pathways. This approach is consistent with how cancer risks are estimated in South Coast AQMD's programs such as permitting, Air Toxics Hot Spots (Assembly Bill [AB] 2588), and CEQA. Previous MATES studies quantified the cancer risks based on the inhalation pathway only. Second, along with cancer risk estimates, MATES V includes information on the chronic noncancer risks from inhalation and non-inhalation pathways for the first time. Cancer risks and chronic noncancer risks from MATES II through IV measurements have been re-examined using current Office of Environmental Health Hazard Assessment (OEHHA) and CalEPA risk assessment methodologies and modern statistical methods to examine the trends over time. This has led to a reduction of the Air Basin average air toxics cancer risk in MATES V of 455 in one million (multiple exposure pathways), compared to MATES IV of 997 in one million.⁵¹ The Air Basin average air toxics cancer risk in MATES V for the inhalation exposure pathway only is 424 in one million. The key takeaways from the MATES V study: air toxics cancer risk has decreased by about 50 percent since MATES IV based on modeling data, MATES V Basin average multi-pathway air toxics cancer risk is 455 in one million, with the highest risk locations being in the Los Angeles International Airport, downtown and the ports areas, diesel particulate matter is the main risk driver for air toxics cancer risk, goods movement and transportation corridors have the highest air toxics cancer risks, and the chronic noncancer risk was estimated for the first time with a chronic hazard index of approximately 5 to 9 across all 10 fixed stations.⁵²

Existing Conditions

Existing Emissions

The City of Carson is a mix of residential, commercial, retail, office, industrial, school, recreational, and open space land uses. Everyday operational activities at these residences and businesses result in the emission of air pollutants associated with vehicle trips, landscaping equipment, on-site combustion of natural gas for heating and cooking, and fugitive emissions of VOCs from the use of aerosol products and coatings and landscaping. However, data with respect to the exact activity level (i.e., utility consumption, trip generation) and building energy standards for each residential or business use is not obtainable. Therefore, existing emissions estimates are based generally on

⁵⁰ SCAQMD, 2021a. *Final Report Multiple Air Toxics Exposure Study in the South Coast Air Basin MATES V*, August. <http://www.aqmd.gov/docs/default-source/planning/mates-v/mates-v-final-report.pdf?sfvrsn=4>, accessed October 24, 2021.

⁵¹ SCAQMD, 2021a. *Final Report Multiple Air Toxics Exposure Study in the South Coast Air Basin MATES V*, August. <http://www.aqmd.gov/docs/default-source/planning/mates-v/mates-v-final-report.pdf?sfvrsn=4>, accessed October 24, 2021.

⁵² SCAQMD, 2021a. *Final Report Multiple Air Toxics Exposure Study in the South Coast Air Basin MATES V*, August. <http://www.aqmd.gov/docs/default-source/planning/mates-v/mates-v-final-report.pdf?sfvrsn=4>, accessed October 24, 2021.

default parameters in the California Emissions Estimator (CalEEMod) for area and building energy source emissions, except for applying the historical data option for operational building energy demand, which adjusts building energy demand to the 2005 standards which were in effect when CARB developed its Scoping Plan 2020 No Action Taken predictions, assuming no wood stoves and no fireplaces in multi-family residential units, and assuming a municipal solid waste diversion rate of 50 percent in compliance with AB 939 and SB 1016 (refer to Section 3.17, *Utilities and Service Systems*, of this Draft EIR, for additional information regarding AB 939 and SB 1016). Existing emissions for mobile sources are based on vehicle miles traveled (VMT) (provided by Fehr & Peers) and on-road mobile source emission factors from the CARB on-road vehicle emissions factors (EMFAC2021) model. **Table 3.2-4, *Estimated Existing Regional Operational Emissions***, presents the regional emissions from the existing development in the City of Carson.

**TABLE 3.2-4
 ESTIMATED EXISTING REGIONAL OPERATIONAL EMISSIONS (POUNDS PER DAY)**

Source	VOC	NO _x	CO	SO ₂	PM10	PM2.5
Existing Development (2016)						
Area (Consumer Products, Landscaping)	7,723	446	8,956	13	921	921
Energy (Natural Gas)	37	321	179	2	25	25
Mobile (Based on 2016 VMT)	2,209	5,749	22,895	37	2,728	744
Total Regional Emissions^a	9,969	6,516	32,030	52	3,675	1,691

^a Totals may not add up exactly due to rounding in the modeling calculations. Detailed emissions calculations are provided in Appendix B. SOURCE: Prepared by Environmental Science Associates based on Appendix B and Appendix F.

Existing Health Risks from Toxics Air Contaminants

As part of the SCAQMD MATES V, the SCAQMD has released a mapping tool that shows regional trends in estimated outdoor cancer risk from TAC emissions, as part of an ongoing effort to provide insight into relative risks. The maps represent the estimated number of potential cancers per million people associated with a lifetime of breathing air toxics (24 hours per day outdoors for 70 years). The background potential cancer risk per million people in the City is estimated in the range of 528 in one million in the northern end of the City and 664 in the southern end of the City (compared to an overall Air Basin-wide risk of 455 in one million (multiple exposure pathways) for the average of 10 fixed monitoring sites).⁵³ Generally, the risk from air toxics is lower near the coastline and increases inland, with higher risks concentrated near large diesel sources (e.g., freeways, airports, rail yards and ports).

Sensitive Populations and Receptors

Certain population groups, such as children, elderly, and acutely and chronically ill persons (especially those with cardio-respiratory diseases), are considered more sensitive to the potential

⁵³ SCAQMD, n.d., Multiple Air Toxics Exposure Study, MATES V Data Visualization Tool, Cancer Risk. https://experience.arcgis.com/experience/79d3b6304912414bb21ebdde80100b23?views=view_38, accessed October 24, 2021.

effects of air pollution than others. SCAQMD defines sensitive receptors as any residence (including private homes, condominiums, apartments, and other living quarters), schools, preschools, daycare centers and health facilities such as hospitals or retirement and nursing homes. It also includes long-term care hospitals, hospices, prisons, and dormitories or similar live-in housing.

Because the Project is a planning document that does not include exact locations, sizes, or land use type for any individual projects that will occur within the City under the proposed General Plan update, there are no specific sensitive locations identified with respect to the Project. As a conservative estimate of impacts, sensitive receptors are anticipated to be located directly adjacent to new development.

3.2.3 Regulatory Framework

This section provides the relevant federal, state, regional, and local regulations applicable to the Project.

Federal

Clean Air Act

The federal Clean Air Act governs air quality in the United States. The USEPA is responsible for implementation and enforcement of the Clean Air Act. The Clean Air Act establishes federal NAAQS and specifies future dates for achieving compliance. It also requires the USEPA to designate areas as attainment, nonattainment, or maintenance. The Clean Air Act also mandates that the state submit and implement a state implementation plan (SIP) for each criteria pollutant if the NAAQS for the pollutant has not been achieved. The SIP includes pollution control measures that demonstrate how the standards will be met. The sections of the Clean Air Act which are most applicable to the Project include Title I (Nonattainment Provisions) and Title II (Mobile Source Provisions).

Title I requirements are implemented for the purpose of attaining NAAQS for the following criteria pollutants: O₃; NO₂; CO; SO₂; PM₁₀; and Pb. The NAAQS were amended in July 1997 to include an 8-hour standard for O₃ and to adopt a NAAQS for PM_{2.5}. The NAAQS were also amended in September 2006 to include an established methodology for calculating PM_{2.5} as well as revoking the annual PM₁₀ threshold.

Table 3.2-1 above shows the NAAQS currently in effect for each criteria pollutant. **Table 3.2-5, *South Coast Air Basin Attainment Status (Los Angeles County)***, shows the attainment status of the Air Basin for each criteria pollutant. As shown in Table 3.2-5, the Air Basin is currently in nonattainment of NAAQS for O₃, PM_{2.5}, and in one area of the Air Basin for Pb.

In addition to criteria pollutants, Title I also includes air toxics provisions which require the USEPA to develop and enforce regulations to protect the public from exposure to airborne contaminants that are known to be hazardous to human health. In accordance with Section 112, the USEPA establishes National Emission Standards for Hazardous Air Pollutants (NESHAPs).

The list of hazardous air pollutants (HAPs), or air toxics, includes specific compounds that are known or suspected to cause cancer or other serious health effects.

**TABLE 3.2-5
 SOUTH COAST AIR BASIN ATTAINMENT STATUS (LOS ANGELES COUNTY)**

Pollutant	National Standards	California Standards
O ₃ (1-hour standard)	Non-attainment – Extreme	Non-attainment
O ₃ (8-hour standard)	Non-attainment – Extreme	Non-attainment
CO	Attainment	Attainment
NO ₂	Attainment	Attainment
SO ₂	Attainment	Attainment
PM10	Attainment	Non-attainment
PM2.5	Non-attainment – Serious	Non-attainment
Lead	Non-attainment (Partial) ^a	Attainment
Visibility Reducing Particles	N/A	Unclassified
Sulfates	N/A	Attainment
Hydrogen Sulfide	N/A	Attainment
Vinyl Chloride	N/A	Attainment

NOTE: N/A = not applicable

^a Partial Nonattainment designation – Los Angeles County portion of the Air Basin only for near-source monitors.

SOURCE: U.S. Environmental Protection Agency 2018g, The Green Book Nonattainment Areas for Criteria Pollutants, <https://www.epa.gov/green-book>. Accessed October 2019; California Air Resources Board 2018f, Area Designations Maps/State and National, <http://www.arb.ca.gov/desig/adm/adm.htm>. Accessed October 2019.

Title II requirements pertain to mobile sources, such as cars, trucks, buses, and planes. Reformulated gasoline, automobile pollution control devices, and vapor recovery nozzles on gas pumps are a few 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 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.

State

California Clean Air Act

The California Clean Air Act, signed into law in 1988, requires all areas of the state to achieve and maintain the CAAQS by the earliest practical date. The CAAQS apply to the same criteria pollutants as the federal Clean Air Act but also include state-identified criteria pollutants, which include sulfates, visibility-reducing particles, hydrogen sulfide, and vinyl chloride. CARB has primary responsibility for ensuring the implementation of the California Clean Air Act, responding to the federal Clean Air Act planning requirements applicable to the state, and regulating emissions from motor vehicles and consumer products within the state. Table 3.2-1 shows the CAAQS currently in effect for each of the criteria pollutants as well as the other

pollutants recognized by the state. As shown in Table 3.2-1, the CAAQS include more stringent standards than the NAAQS for most of the criteria air pollutants.

Health and Safety Code Section 39607(e) requires CARB to establish and periodically review area designation criteria. Table 3.2-5 provides a summary of the attainment status of the Los Angeles County portion of the Air Basin with respect to the state standards. The Air Basin is designated as attainment for the California standards for sulfates and unclassified for hydrogen sulfide and visibility-reducing particles. Because vinyl chloride is a carcinogenic toxic air contaminant, CARB does not classify attainment status for this pollutant.

California Air Resources Board On-Road and Off-Road Vehicle Rules

In 2004, the California Air Resources Board (CARB) adopted an Airborne Toxic Control Measure (ATCM) to limit heavy-duty diesel motor vehicle idling in order to reduce public exposure to DPM and other TACs (Title 13 California Code of Regulations [CCR], Section 2485). The measure applies to diesel-fueled commercial vehicles with gross vehicle weight ratings greater than 10,000 pounds that are licensed to operate on highways, regardless of where they are registered. This measure does not allow diesel-fueled commercial vehicles to idle for more than 5 minutes at any given time.

In 2008, CARB also approved the Truck and Bus regulation to reduce PM and NO_x emissions from existing diesel vehicles operating in California (13 CCR, Section 2025). The requirements were amended to apply to nearly all diesel-fueled trucks and buses with a gross vehicle weight rating (GVWR) greater than 14,000 pounds. For the largest trucks and buses in the fleet, those with a GVWR greater than 26,000 pounds, all must be equipped with diesel particulate filters (DPFs) from 2014 and onward, and must have 2010 model year engines by January 1, 2023. For trucks and buses with a GVWR of 14,001 to 26,000 pounds, those with engine model years 14 to 20 years or older must be replaced with 2010 model year engines in accordance with the schedule specified in the regulation.

In addition to limiting exhaust from idling trucks, CARB also promulgated emission standards for off-road diesel construction equipment of greater than 25 horsepower (hp) such as bulldozers, loaders, backhoes and forklifts, as well as many other self-propelled off-road diesel vehicles. The regulation adopted by CARB on July 26, 2007, aims to reduce emissions by installation of diesel soot filters and encouraging the retirement, replacement, or repower of older, dirtier engines with newer emission controlled models (13 CCR, Section 2449). Implementation is staggered based on fleet size (which is the total of all off-road horsepower under common ownership or control), with large fleets beginning compliance in 2014, medium fleets in 2017, and small fleets in 2019. Each fleet must demonstrate compliance through one of two methods. The first option is to calculate and maintain fleet average emissions targets, which encourages the retirement or repowering of older equipment and rewards the introduction of newer cleaner units into the fleet. The second option is to meet the Best Available Control Technology (BACT) requirements by turning over or installing Verified Diesel Emission Control Strategies (VDECS) on a certain percentage of its total fleet horsepower. The compliance schedule requires that BACT turn overs or retrofits (VDECS installation) be fully implemented by 2023 in all equipment for large and medium fleets and by 2028 for small fleets.

California Air Resources Board Air Quality and Land Use Handbook

CARB published the Air Quality and Land Use Handbook in 2005 to serve as a general guide for considering impacts to sensitive receptors from facilities that emit TAC emissions. The recommendations provided therein are voluntary and do not constitute a requirement or mandate for either land use agencies or local air districts. The goal of the guidance document is to protect sensitive receptors, such as children, the elderly, acutely ill, and chronically ill persons, from exposure to TAC emissions. Some examples of CARB's siting recommendations include the following: (1) avoid siting sensitive receptors within 500 feet of a freeway, urban road with 100,000 vehicles per day, or rural roads with 50,000 vehicles per day; (2) avoid siting sensitive receptors within 1,000 feet of a distribution center (that accommodates more than 100 trucks per day, more than 40 trucks with operating transport refrigeration units per day, or where transport refrigeration unit operations exceed 300 hours per week); (3) avoid siting sensitive receptors within 300 feet of any dry cleaning operation using perchloroethylene and within 500 feet of operations with two or more machines, and (4) avoid siting sensitive receptors within 300 feet of a large gasoline dispensing facility (3.6 million gallons per year or more) or 50 feet of a typical gasoline dispensing facility (less than 3.6 million gallons per year).⁵⁴

In April 2017, CARB published a Technical Advisory supplement to the Air Quality and Land Use Handbook recognizing that infill developments as promoted by the state can place sensitive individuals in close proximity to high-volume roadways. The Technical Advisory provides planners and other stakeholders involved in land use planning and decision-making with information on scientifically based strategies to reduce exposure to traffic emissions near high-volume roadways. The strategies include those that reduce traffic emissions, such as vehicle speed reduction mechanisms, including roundabouts, traffic signal management, and speed limit reductions on high-speed roadways. Strategies also include those that increase the dispersion of traffic emissions, such as implementing designs that promote air flow and pollutant dispersion along street corridors (e.g., wider sidewalks, bicycle lanes, streets characterized by buildings of varying heights), solid barriers such as sound walls, and vegetation for pollutant dispersion. Other strategies include those that remove pollution from the air such as indoor high efficiency filtration. This Technical Advisory is not intended as guidance for any specific project, nor does it create any presumption regarding the feasibility of mitigation measures for purposes of compliance with CEQA.⁵⁵

Airborne Toxics Control Measures

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 the OEHHA determine if a substance should be formally identified, or "listed," as a TAC in California. In the risk management step, CARB reviews emissions 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 ATCMs,

⁵⁴ CARB, 2005, *California Air Resources Board, Air Quality and Land Use Handbook: A Community Health Perspective*, <https://www.arb.ca.gov/ch/handbook.pdf>. Accessed September 2021

⁵⁵ CARB, 2017b, *California Air Resources Board, Air Quality and Land Use Handbook: A Community Health Perspective Technical Advisory*, <https://www.arb.ca.gov/ch/landuse.htm>. Accessed September 2021.

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 emissions 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 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.

Advanced Clean Trucks Regulation

In 2020, CARB approved the Advanced Clean Trucks (ACT) regulation (13 CCR, Sections 1963–1963.5 and 2012–2012.3) to accelerate a large-scale transition to zero- and near-zero-emissions medium- and heavy-duty vehicles. The regulation requires manufacturers of medium- and heavy-duty vehicles to sell an increasing percentage of zero-emissions models from 2024 to 2035 with up to 55 percent of Classes 2b–3 trucks, 75 percent of Classes 4–8 trucks, and 40 percent of truck tractor sales. The regulation also includes reporting requirements to provide information that would be used to identify future strategies. The ACT is part of the statewide goal to considerably reduce NO_x and PM emissions in accordance with the NAAQS, reduce GHG emissions by 40 percent, and reduce petroleum use by 50 percent by 2030. By transitioning to zero-emissions trucks, the state would move away from petroleum dependency and emit less air pollutants from heavy-duty mobile sources.

Heavy-Duty Low NO_x

CARB has proposed the heavy-duty omnibus regulation, which is currently in public review and has not yet been adopted. This regulation would establish heavy-duty engine emissions standards that would reduce NO_x emissions by 90 percent from current standards.

Community Emissions Reduction Program

As discussed under AB 671 above, the WWLBC CERP was finalized and adopted in September 2020. With extensive outreach and input from the stakeholders’ group and the public, the CERP identifies 58 mobile and stationary sources of potential concern and 12 discreet sensitive receptors within the WWLBC community.

The CERP also sets ambitious goals in the reduction of air pollutants in these local communities, specifically NO_x, sulfur oxides (SO_x), ROG, and DPM of 7 percent, 0 percent, <1 percent, respectively, by 2024, and 35 percent, <1 percent, <1 percent, and 22 percent, respectively by

2030.⁵⁶ The CERP outlines actions and commitments to achieve these air pollutant reduction goals. The CERP identified the following six priority strategies for air quality impact reductions:

- Refineries
- Ports
- Neighborhood truck traffic
- Oil drilling and production
- Rail yards
- School and homes

Senate Bill 1000

SB 1000 amended California’s Planning and Zoning Law to require local governments to identify disadvantaged communities and incorporate environmental justice into their general plans. The purpose of SB 1000 is to provide transparent public engagement in local government planning and decision making, to reduce pollutants associated with health risk in environmental justice communities, and to promote equitable access to health-inducing benefits such as healthy food options, housing, public facilities, and recreation.

Assembly Bill 617

Assembly Bill (AB) 617 emphasizes the protection of local communities from the harmful effects of air pollution. As part of AB 617 CARB has implemented the Community Air Protection Program (CAPP) to reduce air pollution and improve public health in communities experiencing disproportionate burdens from exposure to air pollution. The City self-identified as a potential participant in the CAPP, joining other south bay communities such as Wilmington and West Long Beach. The SCAQMD submitted its final recommendations including the Wilmington, West Long Beach, and Carson (WWLBC) community on July 31, 2018, and on Sept 11, 2018, CARB approved the WWLBC community as one of 10 initial communities statewide to be chosen for the development of an air quality monitoring plan or a community emissions reduction program (CERP). This area was chosen for both community air monitoring and the development of a CERP because of the high cumulative exposure burden and the significant number of sensitive populations living within the area in addition to the socioeconomic challenges of the local population. The CERP was approved by CARB on September 10, 2020, and includes several strategies for reducing emissions within the community focusing on the following priority approaches for air quality impact reductions: refineries; ports; neighborhood truck traffic; oil drilling and production; rail yards; school and homes.

Senate Bill 535

Senate Bill (SB) 535 (De León, Chapter 830, 2012) acknowledges that low-income and disadvantaged communities have potentially increased vulnerability to poor air quality and requires funds to be spent to benefit these disadvantaged communities. CalEPA has identified disadvantaged communities based on geographic, socioeconomic, public health, and

⁵⁶ CARB, 2019, *Community Emissions Reduction Program*, p. 5a-3.

environmental hazard criteria as identified in Health and Safety Code Section 39711, Subsection (a).⁵⁷ CalEPA identifies disadvantaged communities as those that score within the top 25 percent of the census tract when analyzed by CalEnviroScreen Version 4.0. Most census tract areas within the City of Carson meet the definition of a disadvantaged community per SB 535.

Regional

South Coast Air Quality Management District

SCAQMD has jurisdiction over air quality planning for all of Orange County, Los Angeles County except for the Antelope Valley, the non-desert portion of western San Bernardino County, and the western and Coachella Valley portions of Riverside County. The SCAB is a subregion within SCAQMD jurisdiction. While air quality in the Air Basin has improved, the Air Basin requires continued diligence to meet the air quality standards.

Air Quality Management Plan

The SCAQMD Governing Board adopted the 2016 AQMP in 2017.⁵⁸ CARB approved the 2016 AQMP in 2017. The AQMP provides analysis on existing and potential regulatory control options to promote criteria pollutants and toxic risk. The AQMP provides strategies for stationary and mobile sources to ensure the region can meet attainment deadlines, public health is protected to the maximum extent feasible, and to avoid sanctions for violation of attainment standards. The main objectives of the AQMP includes implementing fair-share emissions reductions strategies at the federal, state, and local levels; establishing partnerships, funding, and incentives to accelerate deployment of zero and near-zero-emissions technologies; and taking credit from co-benefits from greenhouse gas, energy, transportation and other planning efforts.⁵⁹ The strategies included in the 2016 AQMP are intended to demonstrate attainment of the NAAQS for the federal non-attainment pollutants ozone and PM_{2.5}.⁶⁰

The AQMP contains control measures for reducing emissions from mobile sources, with an emphasis on NO_x and VOC emissions from on-road and off-road sources. Control measures that are most relevant to future development that could occur under the proposed General Plan update include the following:

On-Road Measures

MOB-05-ACCELERATED PENETRATION OF PARTIAL ZERO-EMISSION AND ZERO-EMISSION VEHICLES: This measure proposes to continue incentives for the purchase

⁵⁷ California Office of Environmental Health Hazard Assessment (OEHHA), 2021, CalEnviroScreen 4.0, October 2021, CalEPA Proposed SB 535 Disadvantaged Communities: October 2021 (arcgis.com) <https://oehha.maps.arcgis.com/apps/instant/minimalist/index.html?appid=b2a617f0e8984f3b96d8156bf968a36d>.

⁵⁸ SCAQMD, 2017, *South Coast Air Quality Management District, 2016 Air Quality Management Plan (AQMP)*, <http://www.aqmd.gov/home/air-quality/clean-air-plans/air-quality-mgt-plan/final-2016-aqmp>. Accessed February 2019.

⁵⁹ SCAQMD, 2017, *South Coast Air Quality Management District, 2016 Air Quality Management Plan (AQMP)*, <http://www.aqmd.gov/home/air-quality/clean-air-plans/air-quality-mgt-plan/final-2016-aqmp>. Accessed February 2019.

⁶⁰ SCAQMD, 2016, *South Coast Air Quality Management District, NAAQS/CAAQS and Attainment Status for South Coast Air Basin*. <http://www.aqmd.gov/docs/default-source/clean-air-plans/air-quality-management-plans/naaqs-caaqs-feb2016.pdf?sfvrsn=2>. Accessed September 2021.

of zero-emission vehicles and hybrid vehicles with a portion of their operation in an “all-electric range” mode. The State Clean Vehicle Rebate Pilot (CVRP) program is proposed to continue from 2016 to 2030 with proposed funding up to \$5,000 per vehicle and for low-income eligible residents, additional funding of up to \$1,500 for a total of \$6,500 per vehicle. The California State legislature has appropriated \$133 million statewide for the CVRP for Fiscal Year 2016–17. The proposed measure seeks to provide funding rebates for at least 15,000 zero-emission or partial-zero emission vehicles per year.

MOB-06-ACCELERATED RETIREMENT OF OLDER LIGHT-DUTY AND MEDIUM-DUTY VEHICLES: This proposed measure calls for promoting the permanent retirement of older eligible vehicles through financial incentives currently offered through local funding incentive programs, and AB 118 Enhanced Fleet Modernization Program (EFMP), and the Greenhouse Gas Reduction Fund (EFMP Plus-Up). The proposed measure seeks to retire up to 2,000 older light- and medium-duty vehicles (up to 8,500 pounds GVW) per year. The proposed measure seeks to provide funding assistance for at least 2,000 replacement vehicles per year.

Off-Road Measures

MOB-10-EXTENSION OF THE SOON PROVISION FOR CONSTRUCTION/ INDUSTRIAL EQUIPMENT: To promote turnover (i.e., retire, replace, retrofit, or repower) of older in-use construction and industrial diesel engines, this proposed measure seeks to continue the SCAQMD’s Surplus Off-Road Opt-In for NO_x (SOON) provision of the Statewide In-Use Off-Road Fleet Vehicle Regulation beyond 2023 through the 2031 timeframe. In order to implement the SOON program in this timeframe, funding of up to \$30 million per year would be sought to help fund the repower or replacement of older Tier 0 and Tier 1 equipment to Tier 4 or cleaner equipment, with approximately 2 tons per day (tpd) of NO_x reductions.

MOB-11-EXTENDED EXCHANGE PROGRAM: This measure seeks to continue the successful lawnmower and leaf blower exchange programs in order to increase the penetration of electric equipment or new low emission gasoline-powered equipment used in the region. The proposed extended exchange program will focus on incentives to accelerate the replacement of older equipment with new Tier 4 or cleaner equipment or zero-emission equipment where applicable. In addition, other small off-road equipment (SORE) equipment may also be considered for exchange programs for accelerating the turnover of existing engines.

The AQMP also incorporates measures from the Southern California Association of Governments’ (SCAG) 2016–2040 Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS). Key objectives of the RTP/SCS are discussed further below.

Rules and Regulations

Several SCAQMD rules adopted to implement portions of the AQMP may apply to the Project. For example, SCAQMD Rule 403 requires implementation of best available fugitive dust control measures during active construction periods capable of generating fugitive dust emissions from on-site earth-moving activities, construction/demolition activities, and construction equipment travel on paved and unpaved roads. Rules and regulations that are most relevant to future development that could occur under the proposed General Plan update include the following:

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 that apply to the Project:

- **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 PM10 emissions to less than 50 micrograms per cubic meter ($\mu\text{g}/\text{m}^3$) 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 USEPA.
- **Rule 445 – Wood Burning Devices:** This rule reduces the emission of particulate matter from wood-burning devices and establishes contingency measures for applicable ozone standards for the reduction of volatile organic compounds. The rule generally prohibits the installation of a wood-burning device into any new development, which means residential or commercial, single or multi-building unit, which begins construction on or after March 9, 2009.

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 as a result of project construction activities (i.e., application of architectural coatings, and potential sediment and dirt being tracked onto roads), proposed restaurant uses on-site, and on-site water heaters for the proposed uses:

- **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 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 NO_x 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 PM10 emissions by requiring the cleanup of material deposited onto paved roads (including city street), 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 BACT measures. 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 Noncriteria Pollutants:** Regulation XI sets emissions standards for TACs and other noncriteria pollutant emissions. The following is a list of rules which may apply to the Project due to the demolition of existing buildings/structures that could contain asbestos and the operation of diesel-powered generators during operations since diesel particulate matter is a TAC:
- **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 1466 – Control of Particulate Emissions from Soils with Toxic Air Contaminants:** This rule sets requirements to minimize the amount of fugitive dust containing toxic air contaminants that is emitted during earth-moving activities, including, excavating, grading, handling, treating, stockpiling, transferring, and removing soil that contains applicable TACs. Rule 1166 is applicable to the transportation of soils with applicable TACs through the SCAB. Applicable requirements include covering the truck loads for soil that contains applicable TACs.
- **Rule 1470 – Requirements for Stationary Diesel-Fueled Internal Combustion and Other Compression Ignition Engines:** This rule applies to stationary compression ignition engine 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.

Regulation XXIII– Facility Based Mobile Source Measures: In order to obtain the 80 ppb and 75 ppb 8-hour ozone standards by the 2023 and 2031 applicable attainment dates, respectively, and in support of the 2016 AQMP, the SCAQMD formulated Facility Based Mobile Sources

Rules to reduce NO_x emissions from indirect sources (e.g., mobile sources generated by, or attracted to facilities). The following rule will likely apply to portions of the Project:

- **Rule 2305 – Warehouse Indirect Sources Rule.** Rule 2305 was formally adopted on May 7, 2021.⁶¹ This rule would reduce emissions associated with sources operating in and out of warehouse and distribution centers, consistent with Control Measures MOB 03 from the 2016 AQMP. Rule 2305 will require warehouses greater than 100,000 square feet to directly reduce NO_x and diesel PM, or to facilitate emission and exposure reductions of these pollutants. The Warehouse Actions and Investments to Reduce Emissions (WAIRE) Program is a menu-based points system that will require warehouse operators to annually earn a specified number of points by completing actions from a menu. The amount of WAIRE points needed for compliance is calculated based on weighted annual truck trips (WATTs), and an annual variable and stringency rate. WAIRE points earned can be transferred to a different warehouse utilized by the same warehouse operator, to a different compliance year, or between a warehouse owner and a warehouse operator. After each compliance year, warehouse operators will submit an annual WAIRE Report detailing the WAIRE points needed and the points earned for the reporting year. If a warehouse operator fails to earn enough WAIRE points to satisfy the requirement, they are required to pay a mitigation fee per unattained WAIRE point. The Warehouse Indirect Source Rule provides several compliance options that facilities can choose to meet their point requirements including, but not limited to:
 - (1) Ensure truck fleets that serve their facility during operations are cleaner than required by CARB regulations (verified through a voluntary fleet certification program);
 - (2) Directly control the emissions associated with trucks visiting the facility;
 - (3) Installation of charging/fueling infrastructure for cleaner trucks and transportation refrigeration units (TRUs), conversion of cargo handling equipment to zero-emissions technologies, etc.;
 - (4) Utilization of zero-emissions trucks and incorporation of the infrastructure to support them; and/or
 - (5) Mitigation fees if the facilities emissions exceed cap levels set in the Indirect Source Rule.

Southern California Association of Governments

SCAG is the regional planning agency for Los Angeles, Orange, Ventura, Riverside, San Bernardino and Imperial Counties and addresses regional issues relating to transportation, the economy, community development and the environment. SCAG is the federally designated Metropolitan Planning Organization for the majority of the Southern California region and is the largest Metropolitan Planning Organization in the nation.

SCAG coordinates with various air quality and transportation stakeholders in Southern California to ensure compliance with the federal and state air quality requirements. Pursuant to California Health and Safety Code Section 40460, SCAG has the responsibility of preparing and approving the portions of the AQMP relating to the regional demographic projections and integrated

⁶¹ SCAQMD, 2021b, Governing Board Meeting Agenda, May 7, 2021. <http://www.aqmd.gov/home/news-events/meeting-agendas-minutes/agenda?title=governing-board-meeting-agenda-may-7-2021>.

regional land use, housing, employment, and transportation programs, measures, and strategies. SCAG is required by law to ensure that transportation activities “conform” to, and are supportive of, the goals of regional and state air quality plans to attain the NAAQS. 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.⁶² The RTP/SCS and Transportation Control Measures, included as Appendix IV-C of the 2016 AQMP, 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 VMT 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.⁶³

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 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 GHG emissions targets. The 2020–2045 RTP/SCS will be incorporated into the forthcoming 2022 AQMP.

Local

City of Carson Air Quality Element

The Air Quality Element of the 2004 Carson General Plan establishes air quality guidelines for the City. The General Plan was last comprehensively updated in 2004 and an update of the General Plan is the subject Project.

City of Carson Municipal Code

The City has adopted by reference, Title 31, Green Building Standards Code, of the Los Angeles County Code, as amended and in effect on January 1, 2020, which adopts the California Green Building Standards Code, 2019 Edition (Part 11 of Title 24 of the California Code of Regulations) and is known and may be cited as the Green Building Code of the City of Carson. The provisions of the Building Code, Existing Building Code, Residential Code, and Green Building Code applying to dwellings, lodging houses, congregate residences, motels, apartment houses, or other uses classified by the Building Code as a Group R Occupancy. The Green Building Code increases energy and water efficiency and reduces waste generation. The Green Building Code has co-benefits of reducing criteria pollutant emissions through the increase in energy efficiencies, which reduces building energy demand and the combustion of natural gas within buildings.

⁶² SCAQMD, 2017, *Final 2016 AQMP*, March 2017, page ES-2.

⁶³ SCAQMD, 2017, *Final 2016 AQMP*, March 2017, Figure 1-4.

3.2.4 Project Impact Analysis

Thresholds of Significance and Methodology

Thresholds of Significance

Appendix G of the State CEQA Guidelines provides screening questions that address potential impacts related to a number of environmental issues. The CEQA guidelines provides that lead agencies may use the questions set forth in the Appendix G to assess the significance of a project's environmental effects, and the use of Appendix G as a significance threshold is routinely sanctioned by the courts (although such use is not mandatory). Based on the Appendix G questions regarding air quality, a project would have a significant impact if the project would:

- Threshold AQ-1:** Conflict with or obstruct implementation of the applicable air quality plan;
- Threshold AQ-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 AQ-3:** Expose sensitive receptors to substantial pollutant concentrations; or
- Threshold AQ-4:** Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people.

In determining whether an effect is significant, State CEQA Guidelines (Section 15064.7) state that a lead agency may consider thresholds of significance previously adopted or recommended by other public agencies, provided that the decision to use such thresholds is supported by substantial evidence. Furthermore, with regard to air quality, Appendix G checklist's air quality section preamble reads:

"Where available, the significance criteria established by the applicable air quality management or air pollution control district may be relied upon to make ... determinations."

In a February 2018 CEQA Guidance document released by SCAQMD, the SCAQMD further states that:⁶⁴

"Air districts' thresholds provide a clear quantitative benchmark to determine the significance of project and project alternative air quality impacts. They also help identify the magnitude of the impacts, facilitate the identification of feasible mitigation measures, and evaluate the level of impacts before and after mitigation measures. Since one of the basic purposes of CEQA is to inform government decision makers and the public about the potential, significant environmental effects of any proposed activities (CEQA Guidelines § 15002(a)(1)), use of air district thresholds is a best practice for CEQA impact determinations."

⁶⁴ SCAQMD, 2018, "Guidance on Frequently Questioned Topics in Roadway Analysis for the California Environmental Quality Act," February.

In compliance with State CEQA guidelines and SCAQMD guidance, the City of Carson uses the SCAQMD's established thresholds for evaluating air quality impacts of proposed projects and assessing the significance of quantifiable impacts as applicable under each Appendix G question. The potential air quality impacts of the Project are, therefore, evaluated in consideration of the thresholds adopted by SCAQMD in connection with its CEQA Air Quality Handbook, Air Quality Analysis Guidance Handbook, and subsequent SCAQMD guidance as discussed previously.⁶⁵

Conflict with or Obstruct Implementation of the Applicable Air Quality Plan

The threshold used for determining whether the Project would conflict with or obstruct an applicable air quality plan is qualitative and is based on whether the project is consistent with the assumed growth, applicable control measures and air emission reduction policies in the AQMP. Therefore, the Project would have a significant impact if it would:

- Conflict with or obstruct implementation of the AQMP or any other adopted regional and local plans adopted for reducing air quality impacts.

Cumulatively Considerable Net Increase in Criteria Pollutants

Construction

Given that construction impacts are temporary and limited to the construction phase, SCAQMD has established numerical thresholds of significance for construction air pollutant emissions specific to construction activity. The numerical thresholds are based on the recognition that the Air Basin is a distinct geographic area with a critical air pollution problem for which ambient air quality standards have been promulgated to protect public health.⁶⁶ Based on the thresholds in the SCAQMD CEQA Air Quality Handbook, the Project would potentially cause or contribute to an exceedance of an ambient air quality standard if the following would occur:

- Regional construction emissions from both direct and indirect sources would exceed any of the following SCAQMD prescribed daily emissions thresholds:⁶⁷
 - VOC: 75 pounds per day
 - NO_x: 100 pounds per day
 - CO: 550 pounds per day
 - SO_x: 150 pounds per day
 - PM₁₀: 150 pounds per day
 - PM_{2.5}: 55 pounds per day

⁶⁵ While the SCAQMD CEQA Air Quality Handbook contains significance thresholds for lead, Project construction and operation would not include sources of lead emissions and would not exceed the established thresholds for lead. Unleaded fuel and unleaded paints have virtually eliminated lead emissions from commercial and residential land use projects such as the Project. As a result, lead emissions are not further evaluated in this EIR.

⁶⁶ SCAQMD, 1993, *South Coast Air Quality Management District, South Coast Air Quality Management District, CEQA Air Quality Handbook*, [http://www.aqmd.gov/home/regulations/ceqa/air-quality-analysis-handbook/ceqa-air-quality-handbook-\(1993\)](http://www.aqmd.gov/home/regulations/ceqa/air-quality-analysis-handbook/ceqa-air-quality-handbook-(1993)). Accessed September 2021.

⁶⁷ SCAQMD, 2019, *SCAQMD Air Quality Significance Thresholds*, <http://www.aqmd.gov/docs/default-source/ceqa/handbook/scaqmd-air-quality-significance-thresholds.pdf?sfvrsn=2>. Accessed September 2021.

Operational

The SCAQMD has established numerical thresholds of significance for operational air pollutant emissions. The numerical significance thresholds are based on the recognition that the Air Basin is a distinct geographic area with a critical air pollution problem for which ambient air quality standards have been promulgated to protect public health.⁶⁸ The SCAQMD has established numeric thresholds of significance in part based on Section 182(e) of the Clean Air Act which identifies 10 tons per year of VOC as a significance level for stationary source emissions in extreme non-attainment areas for ozone.⁶⁹ As shown in Table 3.2-5, the Air Basin is designated as extreme non-attainment for ozone. The SCAQMD converted this significance level to pounds per day for ozone precursor emissions (10 tons per year \times 2,000 pounds per ton \div 365 days per year = 55 pounds per day). The numeric thresholds for other pollutants are also based on federal stationary source significance levels. Based on the thresholds in the SCAQMD CEQA Air Quality Handbook, the Project would potentially cause or contribute to an exceedance of an ambient air quality standard if the following would occur:

- Regional operational emissions from both direct and indirect sources would exceed any of the following SCAQMD prescribed daily emissions thresholds:⁷⁰
 - VOC: 55 pounds per day
 - NO_x: 55 pounds per day
 - CO: 550 pounds per day
 - SO_x: 150 pounds per day
 - PM₁₀: 150 pounds per day
 - PM_{2.5}: 55 pounds per day

Sensitive Receptors

Localized Significance Thresholds

The SCAQMD published its Final Localized Significance Threshold Methodology and Final Methodology to Calculate PM₁₀ and PM_{2.5} Significance Thresholds, recommending that all air quality analyses include a localized assessment of both construction and operational impacts of the Project on nearby sensitive receptors.^{71,72} LSTs are only applicable to the following criteria pollutants: NO_x, CO, PM₁₀, and PM_{2.5}. LSTs represent the maximum emissions from an

⁶⁸ SCAQMD, 1993, *South Coast Air Quality Management District, South Coast Air Quality Management District, CEQA Air Quality Handbook*, [http://www.aqmd.gov/home/regulations/ceqa/air-quality-analysis-handbook/ceqa-air-quality-handbook-\(1993\)](http://www.aqmd.gov/home/regulations/ceqa/air-quality-analysis-handbook/ceqa-air-quality-handbook-(1993)). Accessed September 2021.

⁶⁹ SCAQMD, 1993, *South Coast Air Quality Management District, South Coast Air Quality Management District, CEQA Air Quality Handbook*, [http://www.aqmd.gov/home/regulations/ceqa/air-quality-analysis-handbook/ceqa-air-quality-handbook-\(1993\)](http://www.aqmd.gov/home/regulations/ceqa/air-quality-analysis-handbook/ceqa-air-quality-handbook-(1993)). Accessed September 2021.

⁷⁰ SCAQMD, 2019, *SCAQMD Air Quality Significance Thresholds*, <http://www.aqmd.gov/docs/default-source/ceqa/handbook/scaqmd-air-quality-significance-thresholds.pdf?sfvrsn=2>. Accessed September 2021

⁷¹ SCAQMD, 2006, *South Coast Air Quality Management District, Final Methodology to Calculate Particulate Matter (PM)_{2.5} and PM_{2.5} Significance Thresholds*, [http://www.aqmd.gov/docs/default-source/ceqa/handbook/localized-significance-thresholds/particulate-matter-\(pm\)-2.5-significance-thresholds-and-calculation-methodology/final_pm2_5methodology.pdf?sfvrsn=2](http://www.aqmd.gov/docs/default-source/ceqa/handbook/localized-significance-thresholds/particulate-matter-(pm)-2.5-significance-thresholds-and-calculation-methodology/final_pm2_5methodology.pdf?sfvrsn=2). Accessed September 2021.

⁷² SCAQMD, 2008, *South Coast Air Quality Management District, Final Localized Significance Threshold Methodology*, July 2008, <http://www.aqmd.gov/docs/default-source/ceqa/handbook/localized-significance-thresholds/final-lst-methodology-document.pdf>. Accessed September 2021.

individual project site that are not expected to result in an exceedance of federal or state AAQS. LSTs are based on the ambient concentrations of that pollutant within the SRA where a project is located and the distance to the nearest sensitive receptor. The Planning Area is located in the northern portion of SRA 2 (Northwest Los Angeles County Coastal).

In the case of CO and NO₂, if ambient levels are below the air standards for these pollutants, a project is considered to have a significant impact if project emissions result in an exceedance of one or more of these standards. If ambient levels already exceed a state or federal standard, then project emissions are considered significant if they increase ambient concentrations by a measurable amount. This would apply to PM₁₀ and PM_{2.5}, both of which are nonattainment pollutants in the Basin. For these latter two pollutants, the significance criteria are the pollutant concentration thresholds presented in SCAQMD Rules 403 and 1301. The Rule 403 threshold of 10.4 µg/m³ applies to construction emissions (and may apply to operational emissions at aggregate handling facilities). The Rule 1301 threshold of 2.5 µg/m³ applies to non-aggregate handling operational activities.

Sensitive receptors include residences, schools, hospitals, and similar uses that are sensitive to adverse air quality. As previously discussed, sensitive receptors are located in proximity to the Planning Area and have the potential to be exposed to localized construction and operational emissions.

The SCAQMD has established screening criteria that can be used to determine the maximum allowable daily emissions that would satisfy the localized significance thresholds and therefore not cause or contribute to an exceedance of the applicable ambient air quality standards or ambient concentration limits without project-specific dispersion modeling. This analysis uses the screening criteria to evaluate impacts from localized emissions. If the Project would result in exceedance of the following screening criteria LSTs for the above pollutants, this would constitute a significant impact, unless dispersion modeling demonstrates no exceedance of the concentration-based standards.

- Construction (5-acre site within 25 meters of sensitive receptors in SRA 4 and SRA 12):⁷³
 - NO_x: 123 pounds per day (SRA 4) and 98 pounds per day (SRA 12)
 - CO: 1,530 pounds per day (SRA 4) and 630 pounds per day (SRA 12)
 - PM₁₀: 14 pounds per day (SRA 4) and 13 pounds per day (SRA 12)
 - PM_{2.5}: 8 pounds per day (SRA 4) and 7 pounds per day (SRA 12)
- Operation (5-acre site within 25 meters of sensitive receptors in SRA 4 and SRA 12):⁷⁴
 - NO_x: 123 pounds per day (SRA 4) and 98 pounds per day (SRA 12)
 - CO: 1,530 pounds per day (SRA 4) and 630 pounds per day (SRA 12)

⁷³ SCAQMD, 2009, Appendix C – Mass Rate LST Look-up Table, <http://www.aqmd.gov/home/regulations/ceqa/air-quality-analysis-handbook/localized-significance-thresholds>. Accessed October 2019.

⁷⁴ SCAQMD, 2009, Appendix C – Mass Rate LST Look-up Table, <http://www.aqmd.gov/home/regulations/ceqa/air-quality-analysis-handbook/localized-significance-thresholds>. Accessed October 2019.

- PM10: 4 pounds per day (SRA 4) and 4 pounds per day (SRA 12)
- PM2.5: 2 pounds per day (SRA 4) and 2 pounds per day (SRA 12)

Carbon Monoxide Hotspots

With respect to the formation of CO hotspots, the Project would be considered significant if the following conditions would occur at an intersection or roadway within one-quarter mile of a sensitive receptor:

- The Project would cause or contribute to an exceedance of the CAAQS 1-hour or 8-hour CO standards of 20 or 9.0 ppm, respectively.⁷⁵

Toxic Air Contaminants

Based on the criteria set forth by the SCAQMD, the Project would expose sensitive receptors to substantial concentrations of toxic air contaminants if any of the following would occur:⁷⁶

- The Project emits carcinogenic materials or TACs that exceed the maximum incremental cancer risk of ten in one million or a cancer burden greater than 0.5 excess cancer cases (in areas greater than or equal to 1 in 1 million) or an acute or chronic hazard index of 1.0.

Other Emissions

With respect to other emissions such as those leading to odors, the threshold is qualitative. The Project's impact would be considered significant:

- The Project creates an odor nuisance pursuant to SCAQMD Rule 402 and AVAQMD Rule 402.
- The Project exceeds the significance thresholds for regional emissions shown above for attainment, maintenance, or unclassified pollutant emissions.

Methodology and Assumptions

Construction

Construction of new development that could occur from adoption of the proposed General Plan update would have the potential to temporarily emit criteria air pollutant emissions through the use of heavy-duty construction equipment, such as excavators, cranes, and forklifts, and through vehicle trips generated from workers and haul trucks traveling to and from project sites. In addition, fugitive dust emissions would result from demolition and various soil-handling activities.

The Project is a planning-level document, and, as such, there are no specific projects, project construction dates, or specific construction plans identified. Therefore, quantification of emissions associated with buildout cannot be specifically determined at this time. Therefore, the analysis will be based on the potential for construction emissions to exceed threshold values in the context of development intensity and compliance with regulatory emissions standards.

⁷⁵ SCAQMD 2019, SCAQMD Air Quality Significance Thresholds, <http://www.aqmd.gov/docs/default-source/ceqa/handbook/scaqmd-air-quality-significance-thresholds.pdf?sfvrsn=2>. Accessed September 2021.

⁷⁶ SCAQMD 2019, SCAQMD Air Quality Significance Thresholds, <http://www.aqmd.gov/docs/default-source/ceqa/handbook/scaqmd-air-quality-significance-thresholds.pdf?sfvrsn=2>. Accessed September 2021.

Operational

Regional

Operation of new development that could occur from adoption of the proposed General Plan update would generate criteria air pollutant emissions from vehicle trips throughout the City, energy sources, such as natural gas combustion, and area sources, such as operation of landscaping equipment and use of consumer products, including solvents used in non-industrial applications which emit VOCs during their product use, such as cleaning supplies, kitchen aerosols, cosmetics and toiletries. Operational impacts were assessed for the full Project buildout year of 2040, as well as for the existing uses operating in future year 2040. Daily maximum criteria air pollutant emissions were compared with the SCAQMD operational thresholds to determine the operational impacts of the Project.

VMT data, which takes into account mode and trip lengths, was developed for the transportation analysis. Emissions from motor vehicles are dependent on vehicle type. Thus, the emissions were calculated using a representative motor vehicle fleet mix for the Project based on the CARB EMFAC2021 model and default fuel type. EMFAC2021 was used to generate emissions factors for operational mobile sources based on fuel type and vehicle class. However, traffic reduction policies within the General Plan Circulation element, to which the regional travel demand model may not be fully sensitive (such as connectivity in neighborhoods, presence of bicycle and pedestrian facilities, and transportation demand management measures), may not be fully reflected in the VMT and emissions estimates. Therefore, estimated mobile source emissions are conservatively higher.

The operational area emissions from the Project were estimated using the CalEEMod software. Area source emissions are based on hearth emissions, architectural coatings, landscaping equipment, and consumer product usage rates provided in CalEEMod. For new development, CalEEMod default values were used for area source emissions except that wood stoves and wood fireplaces were removed from the emissions calculations as they are not permitted within SCAQMD's jurisdiction for most new commercial and residential development per SCAQMD Rule 445 and no fireplaces in multi-family residential units. Future development is assumed to comply with the Title 24 (2019) building energy efficiency standards, which is a conservative assumption since future Title 24 standards, typically adopted every three years, would reduce building energy demand for future development permitted in 2022 and later. A municipal solid waste diversion rate of 75 percent is assumed in compliance with AB 341 (refer to Section 3.17, *Utilities and Service Systems*, of this Draft EIR, for additional information regarding AB 341).

Local

Localized Significance Thresholds

The localized effects from the on-site portion of daily operational emissions are dependent on the exact size, nature, and location of an individual land use type, combined with reductions in localized impacts from the removal of existing land use types as applicable (i.e., conversion of light industrial uses). Because no specific development projects are identified under the proposed General Plan update, the location of development projects, and the exact nature of the potential development are unknown, determining localized impacts from operational activities at this time is speculative. Therefore, the analysis of localized impacts is discussed qualitatively in this analysis.

Intersection Hotspot Analysis

Operation of the Project has the potential to generate traffic congestion and increase delay times at intersection within the local study area. The pollutant of primary concern when assessing the Project's impacts at local intersections is CO because an elevated concentration of CO tends to accumulate near areas of heavy traffic congestion and where average vehicle speeds are low. Tailpipe emissions are of concern when assessing localized impacts of CO along paved roads.

An adverse concentration of CO, known as a "hotspot", would occur if there was an exceedance of the NAAQS or CAAQS. SCAQMD does not currently have guidance for conducting intersection hot spot analysis. However, Caltrans has guidance for evaluating CO hot spots in their Transportation Project-Level Carbon Monoxide Protocol (CO Protocol). Detailed guidance discussing which modeling programs to use, calculating emission rates, receiver placement, calculating 1-hour and 8-hour concentrations, and utilizing background concentrations are provided in the Caltrans' CO Protocol.

The potential for the Project to cause or contribute to CO hotspots is evaluated by comparing project intersections (both intersection geometry and traffic volumes) with prior studies conducted by SCAQMD in support of their AQMPs and considering existing background CO concentrations.

Toxic Air Contaminants Impacts (Construction and Operations)

Construction and operational activities have the potential to result in health risk impacts (cancer, or other acute or chronic conditions) related to TACs exposure from airborne emissions, specifically the emissions of diesel particulate matter. Health risk is a localized impact based on exposure of sensitive receptors to construction and operational activities that emit TACs. Because there are no specific development projects identified under the proposed General Plan update, the location of the development projects, and the exact nature of the development are unknown, determining health risk as this time is speculative. Therefore, the analysis of health risk is discussed qualitatively in this analysis based on the potential for TAC emissions to exceed threshold values in the context of development intensity, proximity to sensitive receptors, and compliance with regulatory emissions standards.

Project Impact Analysis

Conflict with or Obstruct Applicable Air Quality Plan

Threshold AQ-1: The Project would have a significant impact if future development allowed by Carson2040 would conflict with or obstruct implementation of the applicable air quality plan.

Impact AQ-1: *The Project would not conflict with or obstruct implementation of the applicable air quality plan. (Less than Significant)*

The SCAQMD recommends that, when determining whether a project is consistent with the applicable AQMP, the lead agency should assess whether the project would directly obstruct implementation of the plans by impeding SCAQMD's efforts to achieve attainment with respect to any criteria air pollutant for which it is currently not in attainment of the NAAQS and CAAQS

(e.g., ozone, PM10, and PM2.5) and whether it is consistent with the demographic and economic assumptions (typically land use related, such as employment and population/residential units) upon which the plan is based. The SCAQMD numerical significance thresholds for construction and operational emissions are designed for the analysis of individual projects and not for long-term planning documents, such as the proposed General Plan update. Emissions are dependent on the exact size, nature, and location of an individual land use type, combined with reductions in localized impacts from the removal of existing land use types, as applicable (i.e., conversion of light industrial uses). Emissions associated with the operation of individual projects, could exceed project-specific thresholds established by SCAQMD. SCAQMD guidance indicates that projects whose growth is included in the projections used in the formulation of the AQMP are considered to be consistent with the plan and would not interfere with its attainment even if the numerical significance thresholds would be exceeded.⁷⁷

As discussed above, the SCAQMD has adopted a series of AQMPs to lead the Air Basin into compliance with several criteria air pollutant standards and other federal requirements, while taking into account construction and operational emissions associated with population and economic growth projections provided by SCAG. The 2016 AQMP incorporates population and economic growth projections from SCAG's 2016–2040 RTP/SCS.

CEQA requires that general plans be evaluated for consistency with the AQMP. Because the AQMP strategy is based on projections from local general plans, only new or amended general plan elements, specific plans, or individual projects under the general plan need to undergo a consistency review. Projects considered consistent with the local general plan are consistent with the air quality-related regional plan. Indicators of consistency include:

- **Control Strategies:** Whether implementation of a project would increase the frequency or severity of existing air quality violations; would cause or contribute to new violations; or would delay the timely attainment of AAQS or interim emissions reductions within the AQMP.
- **Growth Projections:** Whether implementation of the project would exceed growth assumptions within the AQMP, which in part, bases its strategy on growth forecasts from local general plans.

Construction

Control Strategies

The Air Basin is designated nonattainment for O₃ and PM_{2.5} under the CAAQS and NAAQS, nonattainment for lead (Los Angeles County only) under the NAAQS, and nonattainment for PM₁₀ under the CAAQS. The Project involves long-term growth associated with buildout of the City of Carson, therefore the emissions of criteria pollutants associated with future developments under the Project could exceed SCAQMD thresholds for criteria pollutants. Future development under the proposed General Plan update would be required to comply with CARB's requirements to minimize short-term emissions from on-road and off-road diesel equipment, including the ATCM to limit heavy-duty diesel motor vehicle idling to no more than 5 minutes at any given time, and with SCAQMD's regulations such as Rule 403 for controlling fugitive dust and Rule

⁷⁷ SCAQMD, 1993, *CEQA Air Quality Handbook*, Chapter 12, page 12-1.

1113 for controlling VOC emissions from architectural coatings. Furthermore, as applicable to the type of growth, individual projects under the proposed General Plan update would comply with fleet rules to reduce on-road truck emissions. Compliance with these measures and requirements would be consistent with and meet or exceed the AQMP requirements for control strategies intended to reduce emissions from construction equipment and activities. Therefore, the construction anticipated by the Project would be consistent with the AQMP under the first indicator.

Growth Projections

The Project would result in an increase in short-term employment compared to existing conditions. Although the construction anticipated by the Project will generate construction workers, it would not necessarily create new construction jobs; construction-related jobs generated by the Project would likely be filled by employees within the construction industry within the City of Carson and the greater Los Angeles County region. Construction industry jobs generally have no regular place of business, as construction workers commute to job sites throughout the region, which may change several times a year. Moreover, these jobs would be temporary in nature. Therefore, the construction jobs generated by the Project would not conflict with the long-term employment or population projections upon which the AQMPs are based.

Operation

Control Strategies

Future development under the Project would be required to comply with CARB motor vehicle standards, SCAQMD regulations for stationary sources and architectural coatings, Title 24 energy efficiency standards, and, to the extent applicable, to the growth projections in the 2016–2040 RTP/SCS, which are incorporated into the 2016 AQMP.

As discussed above, the AQMP includes land use and transportation strategies from the 2016–2040 RTP/SCS that are intended to reduce VMT and resulting regional mobile source emissions. The applicable land use strategies include: planning for growth around livable corridors; providing more options for short trips/neighborhood mobility areas; supporting zero emission vehicles and expanding vehicle charging stations; and supporting local sustainability planning. The applicable transportation strategies include: managing through the Transportation Demand Management (TDM) Program and the Transportation System Management (TSM) Plan including advanced ramp metering, and expansion and integration of the traffic synchronization network; and promoting active transportation. The majority of the transportation strategies are to be implemented by cities, counties, and other regional agencies such as SCAG and SCAQMD, although some can be furthered by individual development projects.

The location, design, and land uses of the growth anticipated by the Project would implement land use and transportation strategies related to reducing vehicle trips for residents and employees of the City by increasing commercial and residential density with over 95 percent of new residential development planned for multi-family dwelling units, which would allow for increased mixed-use density at infill locations and near public transit. Several transit agencies provide local and regional transit service to the residents of Carson, including Metro, Long Beach Transit, Compton Renaissance Transit, Gardena Transit, and Torrance Transit. Several routes in Carson

provide access to the Metro A (Blue) Line, which passes through the eastern edge of Carson without stops. The Harbor Gateway Transit Center is located just west of the City, adjacent to I-110. This transit center is a stop on the Metro Silver Line, which provides critical regional access to downtown Los Angeles and east to the El Monte Station. Connection to the Transit Center is provided by Metro Lines 52 and 246. Both Long Beach Transit and Torrance Transit provide access to Long Beach, including the Long Beach Transit Gallery, located at the downtown Long Beach A Line station. Torrance Transit also provides access to the South Bay, including to the South Bay Galleria Transit Center and the Redondo Beach Pier. Refer to Table 3.15-2 in Section 3.15, *Transportation*, of this Draft EIR, for a summary of transit service in the City of Carson.

The proposed General Plan update focuses on infill development and revitalization to help the City of Carson transition from a predominantly industrial and suburban community to a complete city with an integrated mix of housing, employment, educational, cultural, and recreational options balanced with industrial uses. These efforts are targeted in the Core and in centers around the Core, expanding on recent development along Carson Street. Development in the centers, along key corridors, and large opportunity sites such as the Shell property on East Del Amo Boulevard and South Wilmington Avenue are envisioned to be connected by community-oriented Boulevards that feature public gathering spaces and pedestrian- and bicycle-oriented designs. New land use designations that introduce greater flexibility through emphasis on mixed uses instead of single uses are proposed to facilitate development to achieve this vision and respond to the need to accommodate the City's growing and diverse population.

The proposed General Plan update outlines strategies for greater integration of uses in different parts of the city and a better connection between employment and residential uses, with more areas designated for mixed-use development. It recognizes the physical elements that help define the character of Carson, including existing residential neighborhoods, downtown Core, industrial/business centers, and corridors. This structure helps establish a clear multi-modal network throughout the city by focusing on both community destinations as well as the efficiency, safety, and convenience of the modes of transportation in between. Higher densities, especially in mixed-use designations, increase capacity for residential development near community-serving commercial, retail, and office uses as well as schools, parks, and recreational facilities, and proposed improvements to the bicycle, pedestrian, and road networks will make it easier for residents to travel throughout the community. Therefore, the Project would not conflict with AQMP land use and transportation strategies that are intended to reduce VMT and resulting regional mobile source emissions and would result in a less than significant impact associated with air quality. The proposed General Plan update would be consistent with the AQMP under the first indicator.

Growth Projections

The Emissions inventory for the South Coast Air Basin is formed, in part, by existing city and county general plans. The AQMP is based on population, employment and VMT forecasts by SCAG. A project might be in conflict with the AQMP if the development is greater than that anticipated in the local general plan and SCAG's growth projections. Future development in the City of Carson that is consistent with the proposed General Plan update would increase vehicle trips and VMT that would result in emissions of ozone precursors and particulate matter.

Individual projects under the proposed General Plan update would be required to undergo subsequent environmental review pursuant to CEQA, and would be required to demonstrate compliance with the AQMP. Individual projects would also be required to demonstrate compliance with SCAQMD rules and regulations governing air quality.

The City of Carson continues to coordinate with SCAQMD and SCAG to ensure city-wide growth projections, land use planning efforts, and local development patterns are accounted for in the regional planning and air quality planning processes. Therefore, the operation of the proposed General Plan update would not conflict with or obstruct the implementation of the applicable air quality plan. The proposed General Plan policies listed below would potentially reduce emissions, which would address potential impacts related to conflicts with an applicable air quality plan.

Proposed General Plan Policies that Address the Impact

Land use and Revitalization

Guiding Policies

- LUR-G-2 Balance employment and housing within the community to provide more opportunities for Carson residents to work locally, cut commute times, and improve air quality.
- LUR-G-4 Promote a diversity of complementary uses in different parts of the city, including mixed flexible office space, retail, dining, residential, hotels, and other compatible uses, to foster vibrant, safe, and walkable environments, with flexibility to accommodate emerging uses and building typologies.
- LUR-G-6 Encourage revitalization of corridors as pedestrian-oriented, mixed-use residential, retail, and office community spines, serving as focal points for neighborhood amenities and services, and helping foster neighborhood identity and vitality.
- LUR-G-7 Develop Carson’s central Core—extending approximately 1.7 miles both east-west along West Carson Street and north-south along Avalon Boulevard and including the South Bay Pavilion—into a vibrant, pedestrian-oriented mixed-use hub of the community, with housing, retail, and other commercial uses, and civic uses and community gathering spaces.
- LUR-G-9 Locate medium and high-density development along major corridors and major re-development sites in the central Core, to focus housing near regional access routes, transit stations, employment centers, shopping areas, and public services.
- LUR-G-11 Encourage mixed-use development (two or more uses within the same building or in close proximity on the same site), especially in the Core area, to promote synergies between uses.

Implementing Policies

- LUR-P-1 Where feasible, locate higher density residential uses in proximity to job centers and commercial centers in order to discourage long commute times and encourage pedestrian traffic and provide a consumer base for commercial uses.

- LUR-P-8 Promote development of neighborhood-scaled commercial centers in residential areas to serve the everyday needs of nearby residents.
- LUR-P-11 Promote ground level commercial uses to foster pedestrian activity and visual engagement and provide commercial uses to serve residents of surrounding neighborhoods. Where commercial uses are or were present as of 2021, at least half of the commercial area shall be retained or replaced as part of new development. Where more than 0.1 FAR ground level active commercial uses are provided (new or through replacement), the City may grant residential density increase up to 60 percent on a graduated scale as specified in the Zoning Ordinance and Table 2-2.
- LUR-P-12 Prohibit uses in the Core (as shown in Figure 2-3) that do not add to a strong pedestrian character, such as warehouses, gas stations, drive-through establishments, industrial, and other new development whose design prioritizes automobile access.
- LUR-P-13 Focus new residential, commercial and employment-generating land uses along Carson Street and Avalon Boulevard in order to support higher-frequency transit service. Provide adequate infrastructure, such as bus lanes or bus shelters at bus stops, to support transit service usage.
- LUR-P-16 Where larger parcels—such as the Shell site—are redeveloped, require development to implement urban design policies, including creation of smaller blocks (typically with no dimension larger than 300 to 600 feet dependent on use, with smaller blocks in residential areas) to create walkable, urban environments; buildings and landscapes that relate to the surroundings, with high-level of public-realm amenities, such as tree-lined streets; sidewalks, pedestrian paths, and crossings; and plazas and other gathering spaces for workers and visitors. Site planning for new construction should ensure that streets are lined with occupied buildings or landscapes, with parking and service facilities tucked behind or away from public streets.
- LUR-P-18 Promote infill mixed-use development in either a vertical or horizontal configuration when aging shopping centers are redeveloped to create mixed-use corridors with a range of housing types at mid-to-high densities along their lengths and activity nodes at key intersections with retail/commercial uses to serve the daily needs of local residents.
- This policy applies to areas that are designated as Corridor Mixed Use or Downtown Mixed Use, such as within the city's Core and Carson Plaza near the [California State University, Dominguez Hills] CSU-DH campus.*
- LUR-P-24 Promote the development of sites designated as Business Residential Mixed Use (BRMU) with a vibrant mix of business and residential uses that include:
- For the Shell site, require at least a minimum of 25 acres of open space, 18 of which as a centralized park or open space and seven acres along the western border of the property as a Greenway Corridor/buffer. Exact locations and acreages should be specified during project planning.
 - For the Shell site, require at least a minimum nine acres of General Commercial at the south-west corner of Del Amo Boulevard and

Wilmington Avenue or at a centralized location. Other commercial uses are encouraged throughout the site as mixed-use development.

- Encourage residential development with a range of housing types, and technology, research and development, and office uses if determined to be suitable from an environmental perspective.
- Require development to be connected to the surroundings, with through streets, and walkable urban design patterns. See additional policies in Chapter 4: Community Character, Identity, and Design Element.
- When housing is proposed adjacent to industrial uses, require the development of a cohesive master or specific plan to include surrounding property owners to ensure compatibility. The Shell site is required to have a similar plan to outline long-term growth of the site.

Circulation

Guiding Policies

- CIR-G-1 Provide a balanced transportation system of multimodal networks providing a broad range of travel options to make transportation convenient, comfortable, and safe for people of all abilities.
- CIR-G-2 Promote bicycling and walking, and support and improve connections to local and regional transit service.
- CIR-G-3 Manage the transportation network to minimize roadway congestion, while balancing traffic Level of Service (LOS) objectives with promoting reduction in vehicle miles traveled and considerations of community character and design.
- CIR-G-4 Encourage the development of a multimodal freight transportation system that balances the need for effective and efficient transportation of goods with the health and wellbeing of the community.

Implementing Policies

- CIR-P-1 Update the City’s Bicycle Plan, identifying a citywide bicycle network of off-street bike paths, on-street bike lanes and bike streets. As part of the plan, consider bicycle lockers, secure bike parking, pavement condition, and access to transit, parks, and schools throughout the city. The update of the Bicycle Plan should strategically identify projects that will improve equity, the environment, reduce trips on the roadway system, and prioritize projects that align with primary local active transportation grant funding programs including Metro, SCAG, and Caltrans.
- CIR-P-2 Develop a First Last Mile Plan to improve walking and biking connections to future and existing transportation hubs.
- CIR-P-3 Establish bike hubs (centralized locations with convenient bike parking for trip destinations or transfer to other transportation modes), at key transit nodes or commercial nodes.
- CIR-P-4 Evaluate opportunities, such as new development or changes to the transit network, to enhance existing and proposed Class II bike lanes and Class III

- bike routes to protected bike lanes and bike routes to bike lanes or bike boulevards.
- CIR-P-16 Work with Long Beach Transit to serve local neighborhoods and connect residences with shopping, employment, transit, and recreational opportunities.
- CIR-P-17 Participate in and encourage collaboration among adjacent cities to provide a more reliable public transportation system the area.
- CIR-P-19 Work with regional transit services to develop an on-demand transportation system that caters to senior populations and people with disabilities.
- CIR-P-20 Evaluate and adjust transit routes to better connect disadvantaged communities with major transit hubs and key destinations such as parks, schools, and healthy food opportunities.
- CIR-P-21 Work with transit providers in the city to implement public transportation improvements and enhance first-last mile connections at highly utilized transit stops.
- CIR-P-22 Develop a transportation demand management (TDM) ordinance. A TDM ordinance would incorporate strategies appropriate for the local context and land use as different strategies are more effective at reducing employee commute trips, while others focus on reducing residential, shopping, or other discretionary trips. Strategies will generally focus on land use, parking, transit, and active transportation.
- CIR-P-23 Pursue the implementation of TDM strategies through application of the City’s Transportation Study Guidelines and compliance with Senate Bill 743 that seeks to reduce per capita VMT for residential, retail, and office trips.
- CIR-P-24 Encourage local public agencies and employers to implement TDM policies that promote VMT reductions. The research in this area is regularly evolving and can help identify viable and defensible VMT reduction strategies.
- CIR-P-25 Evaluate the potential for strategies that can reduce VMT such as citywide bike-sharing, promote car-sharing and other electrified modes as options to reduce traffic congestion.
- CIR-P-26 Prioritize and identify disadvantaged community locations to develop sustainable mobility hubs that include car-sharing, bike-sharing and public EV charging infrastructure to minimize traffic and air quality effects.
- CIR-P-27 Require all new and substantially renovated office, retail, industrial, and multi-family developments to provide EV charging infrastructure and EV ready parking.
- CIR-P-32 Enhance infrastructure to accommodate last mile delivery services for low carbon solutions, such as last mile bicycle delivery.
- CIR-P-33 Promote the deployment of near-zero and zero-emissions trucks for urban deliveries, port drayage trips, regional, and long-haul trips by providing charging infrastructure and plug-in technologies for extended idling.

CIR-P-34 Encourage deployment of alternative-fueled vehicles through advancement of new technologies, such as autonomous vehicles that are anticipated to be a pathway to electric vehicles.

Community Health and Environmental Justice

Guiding Policies

- CHE-G-2 Reduce air pollution and the incidence of respiratory illness through the land use planning process.
- CHE-G-3 Proactively coordinate City air quality improvement activities with the South Coast Air Quality Management District and other regional programs, as well as with neighboring communities.
- CHE-G-8 Improve bike, pedestrian, and transit connectivity to community facilities and services, especially in underserved areas.

Implementing Policies

- CHE-P-5 Recognize and actively promote policies to create a multimodal transportation system that reduces solo driving.
- CHE-P-6 Collaborate with South Coast Air Quality Management District (SCAQMD) to coordinate policies that reduce air pollution from local sources and implement programs that leverage funding from Senate Bill (SB) 535, Assembly Bill (AB) 1550, AB 617, and other sources to improve air quality and public health.

Open Space and Environmental Conservation Element

Guiding Policy

- OSEC-G-17 Support regional efforts to reduce pollution from significant sources that negatively affect the City, such as port and truck pollution from the ports of Los Angeles and Long Beach.
- OSEC-G-18 Continue to work with South Coast Air Quality Management District (SCAQMD) to reduce generation of air pollutants, improve air quality, and meet all national and state ambient air quality standards.
- OSEC-G-19 Seek to reduce mobile sources of air pollution by creating denser and walkable neighborhoods, promoting transit-oriented development, and improving bicycle infrastructure, with the goal to reduce the number of miles traveled in cars and improve regional air quality.
- OSEC-G-20 Seek to reduce air quality impacts of industrial and commercial uses, like oil refineries and trucking, for both mobile and stationary sources of pollution.
- OSEC-G-21 Lessen exposure of sensitive uses to pollutants emitted by mobile sources by buffering freeways, major arterials, and truck routes with trees and vegetation.
- OSEC-G-22 Promote clean and alternative fuel combustion in City-owned mobile equipment and vehicles.

Implementing Policy

- OSEC-P-33 Work with SCAQMD on compliance with Rule 2305 Warehouse Indirect Source Rule – Warehouse Actions and Investments to Reduce Emissions

(WAIRE) for operators of warehouse distribution centers with greater than or equal to 100,000 square feet of indoor floor space in a single building.

- OSEC-P-34 Continue to encourage and assist employers in developing and implementing work trip reduction plans, employee ride sharing, modified work schedules, preferential carpool and vanpool parking, or any other trip reduction approach that is consistent with the SCAQMD.
- OSEC-P-35 Cooperate with the SCAQMD on regional air quality management plans, programs, and enforcement measures to achieve emissions reductions for nonattainment pollutants and their precursors—including diesel, ozone, PM2.5, and PM10—by implementing air pollution control measures as required by state and federal statutes.
- OSEC-P-36 Cooperate with federal and state agencies and the SCAQMD in their efforts to reduce exposure from railroad, truck, and port emissions.
- OSEC-P-43 Support SCAQMD efforts to reduce transportation-related emissions, including electric charging requirements for buildings including warehouses and truck idling restrictions.
- OSEC-P-46 Continue to implement strategies to reduce government operation emissions, including City employee work trip reduction programs, work from home options, and use of alternative fuel vehicles. Strive to have the City-owned vehicle fleet to be 100 percent electric or alternative fuel by 2040 or sooner.
- OSEC-P-47 Through the development review process, reduce air pollutant emissions impacts associated with facilities/industrial uses in Carson, to the greatest extent possible, by preparing air quality mitigation and monitoring measures, implementing reduction strategies, and limiting PM10 producers and other polluting industries from locating in the City.
- OSEC-P-48 Continue to work with industries and regulatory agencies to monitor, regulate, and provide quick response and communication with the community in the event of an emergency impacting air quality.
- OSEC-P-49 Use the City’s development review process and the California Environmental Quality Act (CEQA) regulations or strategies and measured outlined in the CAP to evaluate and mitigate the local and cumulative effects of new development on air quality and GHG emissions.

Mitigation Measures

None required.

Result in Cumulatively Considerable Net Increase of any Criteria Pollutant for which the Region is Non-attainment

Threshold AQ-2: The Project would have a significant impact if future development allowed by Carson2040 would 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 AQ-2: *The Project would result in a cumulatively considerable net increase of a criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard. (Significant and Unavoidable)*

Ozone, NO₂ and VOC (as ozone precursors), PM₁₀, and PM_{2.5} are pollutants of concern, as the South Coast Air Basin has been designated as a nonattainment area for state ozone, PM₁₀, and PM_{2.5} and as a federal nonattainment area for ozone and PM₁₀. The South Coast Air Basin is currently in attainment for state and federal CO, SO₂, and NO₂ and federal attainment for PM₁₀. SCAQMD has established numerical significance thresholds for regional emissions during construction and operation. The numerical significance thresholds are based on the recognition that the Air Basin is a distinct geographic area with a critical air pollution problem for which ambient air quality standards have been promulgated to protect public health. The Project would potentially cause or contribute to an exceedance of an ambient air quality standard if the following would occur.

Construction

Construction has the potential to create regional air quality impacts through the use of heavy-duty construction equipment and through vehicle trips generated by construction workers and haul trips traveling to and from each specific project site. In addition, fugitive dust emissions would result from construction activities. During the finishing phase, the application of architectural coatings (i.e., paints) and other building materials would release VOCs. 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. However, as there are no specific projects currently approved or proposed under the Project and there is no knowledge as to timing of construction, location or the exact nature of future projects, analysis of construction emissions would be speculative at best. Information regarding specific development projects, including specific buildings and facilities proposed to be constructed, construction schedules, quantities of grading, and other information would be required in order to provide a meaningful estimate of emissions. Since this information is unknown, emissions modeling is not feasible.

Each future project developed under the proposed General Plan update would be required to comply with SCAQMD rules and regulations as well as conduct their own applicable CEQA analysis and would determine significance based on the individual project specifics. Furthermore, future construction activities under the proposed General Plan update would be required to comply with the CARB Air Toxics Control Measure, which limits diesel powered equipment and vehicle idling to no more than five minutes at a location, and the CARB In-Use Off-Road Diesel Vehicle regulation, CARB Truck and Bus regulation, and CARB ACT regulation, which all

require construction equipment and vehicle fleet operators to repower or replace higher-emitting equipment with less polluting models, including zero- and near-zero-emissions on-road truck technologies as they become developed and commercially available. Additionally, construction of future development would be required to comply with SCAQMD rules and regulations including Rule 403 for the control of fugitive dust and Rule 1113 for the control of VOC emissions from architectural coatings. Mandatory compliance with these CARB and SCAQMD rules and regulations would reduce emissions, particularly for NO_x, PM10, and PM2.5, during future construction activities under the proposed General Plan update.

Even with mandatory compliance with CARB and SCAQMD rules regulations, it is possible that some future development projects could be large enough in scale and/or intensity such that many pieces of heavy-duty construction equipment and/or heavy-duty trucks may be required and that construction period emissions could exceed the SCAQMD significance thresholds. Therefore, project-related construction activities could result in a significant regional air quality impact.

Operation

Operation of future development under the proposed General Plan update would generate criteria pollutant emissions from vehicle trips traveling within the City, energy sources such as natural gas combustion, and area sources such as landscaping equipment and consumer products usage. The on-road mobile sources related to the operation of the Project include passenger vehicles, on-site use of off-road equipment, and delivery trucks. VMT data, takes into account ridership, mode, and distance on freeways and local streets. Projected emissions resulting from operational activities of both existing and future development under the proposed General Plan update are presented in **Table 3.2-6, Estimated Carson2040 Regional Operational Emissions.**

**TABLE 3.2-6
 ESTIMATED CARSON2040 REGIONAL OPERATIONAL EMISSIONS (POUNDS PER DAY)**

Source	VOC	NO _x	CO	SO ₂	PM10	PM2.5
Existing Development plus Carson2040 New Development (2040)						
Area (Consumer Products, Landscaping)	8,311	462	10,086	13	928	928
Energy (Natural Gas)	45	393	220	2	31	31
Mobile (Based on 2040 with GPU VMT)	684	1,515	6,513	27	2,623	671
Total Regional Emissions^a	9,040	2,371	16,819	42	3,582	1,630
Existing Development (2016)	9,969	6,516	32,030	52	3,675	1,691
Net Change	(929)	(4,145)	(15,211)	(9)	(93)	(61)
SCAQMD Regional Significance Threshold	55	55	550	150	150	55z
Exceeds Thresholds?	No	No	No	No	No	No

^a Totals may not add up exactly due to rounding in the modeling calculations. Detailed emissions calculations are provided in Appendix B.

SOURCE: Prepared by Environmental Science Associates based on Appendix B and Appendix F.

As shown in Table 3.2-6, the net change in operational emissions from existing conditions (2016) compared to existing plus buildout of new development under the proposed General Plan update would not exceed the SCAQMD regional significance thresholds. The net change in emissions at 2040 buildout would be negative compared to existing (2016) conditions primarily due to the focus of the proposed General Plan update on infill development and revitalization to help the City of Carson achieve an integrated land use mix that accommodates growth while reduces VMT and associated emissions, improvements in vehicle emissions standards and, to a lesser extent, improvements in building energy efficiency standards. It should be noted that the SCAQMD thresholds were specifically developed for use in determining significance for individual projects and not for program-level documents, such as the General Plan. Furthermore, development of the new residential and nonresidential uses would be based on market demand and would be constructed over the buildout duration through 2040. Overlapping emissions from the construction and operation of new phased development could occur under the proposed General Plan update, and the SCAQMD requires such overlapping emissions to be compared to the numeric thresholds for operations. It is possible that some future development projects could be large enough in scale and/or intensity such that overlapping emissions from the construction and operation of new phased development could exceed the SCAQMD significance thresholds and result in a significant regional air quality impact.

The proposed General Plan policies, listed below, would potentially reduce emissions, which could potentially address impacts. In addition, future development under the proposed General Plan update would be required to conduct their own CEQA analysis and would determine significance based on the individual project specifics. Through each project's individual environmental review process, potential impacts would be identified and compared against relevant thresholds. Individual projects that exceed the thresholds would normally result in a potentially significant impact and require mitigation.

Proposed General Plan Policies that Address the Impact

Guiding Policies LUR-G-2, LUR-G-4, LUR-G-6, LUR-G-7, LUR-G-9, LUR-G-11, CIR-G-1, CIR-G-2, CIR-G-3, CIR-G-4, CHE-G-8, OSEC-G-17, OSEC-G-18, OSEC-G-19, OSEC-G-20, OSEC-G-21, and OSEC-G-22, and Implementing Policies LUR-P-1, LUR-P-8, LUR-P-11, LUR-P-12, LUR-P-13, LUR-P-16, LUR-P-18, LUR-P-24, CIR-P-1, CIR-P-2, CIR-P-3, CIR-P-4, CIR-P-16, CIR-P-17, CIR-P-19, CIR-P-20, CIR-P-21, CIR-P-22, CIR-P-23, CIR-P-24, CIR-P-25, CIR-P-26, CIR-P-27, CIR-P-32, CIR-P-33, CIR-P-34, CHE-P-5, OSEC-P-33, OSEC-P-34, OSEC-P-35, OSEC-P-36, OSEC-P-43, OSEC-P-46, OSEC-P-47, OSEC-P-48, and OSEC-P-49, as discussed under Impact AQ-1.

Mitigation Measures

Construction

MM AQ-1: Applicants for new development projects within the Planning Area that are subject to CEQA (California Environmental Quality Act) review (i.e., non-exempt projects) and that exceed the South Coast Air Quality Management District (SCAQMD) significance thresholds during construction for emissions of NO_x, CO, PM₁₀ and/or PM_{2.5} shall require the construction contractor to use equipment that meets the US Environmental Protection Agency (USEPA) Tier 4 emissions standards for off-road

diesel-powered construction equipment with more than 50 horsepower, unless it can be demonstrated to the City of Carson Department of Building and Safety that such equipment is not available. 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 the California Air Resources Board's (CARB) regulations.

Prior to construction, the project engineer shall ensure that all plans for construction phases (e.g., demolition, grading) that would exceed the SCAQMD significance thresholds clearly show the requirement for EPA Tier 4 or higher emissions standards for construction equipment over 50 horsepower. During construction, the construction contractor shall maintain a list of all operating equipment in use on the construction site for verification by the City of Carson Department of Building and Safety. The construction equipment list shall state the makes, models, and numbers of construction equipment on-site. Equipment shall be properly serviced and maintained in accordance with the manufacturer's recommendations. Construction contractors shall also ensure that all nonessential idling of construction equipment is restricted to five minutes or less in compliance with Section 2449 of the California Code of Regulations, Title 13, Article 4.8, Chapter 9.

MM AQ-2: Applicants for new development projects within the Planning Area that are subject to CEQA (California Environmental Quality Act) review (i.e., non-exempt projects) and that exceed the South Coast Air Quality Management District (SCAQMD) significance thresholds during construction for emissions of volatile organic compounds (VOCs) as a result of VOC off-gassing emissions from architectural coatings and industrial maintenance coatings shall require the construction contractor to use SCAQMD Low-VOC and/or Super-Compliant VOC architectural coatings and industrial maintenance coatings such that daily volume of coatings applied would not result in emissions that exceed the SCAQMD significance threshold for VOC, unless it can be demonstrated to the City of Carson Department of Building and Safety that such coatings for a required application are not available. During construction, the construction contractor shall maintain a list of all architectural coatings and industrial maintenance coatings in use on the construction site and the daily volumes of coatings applied for verification by the City of Carson Department of Building and Safety.

Operations

MM AQ-3: Applicants for new development projects within the Planning Area that are subject to CEQA (California Environmental Quality Act) review (i.e., non-exempt projects) and that exceed the South Coast Air Quality Management District significance thresholds during operations shall, prior to issuance of a building permit for new development projects within the General Plan Update area, show on the building plans that all major appliances (dishwashers, refrigerators, clothes washers, and dryers) to be provided/installed are Energy Star-certified appliances or appliances of equivalent energy efficiency. Installation of Energy Star or equivalent appliances shall be verified by the City of Carson Department of Building and Safety prior to issuance of a certificate of occupancy.

MM AQ-4: Applicants for new residential development projects within the Planning Area that are subject to CEQA (California Environmental Quality Act) review (i.e., non-exempt projects) and that exceed the South Coast Air Quality Management District

significance thresholds during operations shall, prior to issuance of a building permit for new development projects within the Planning Area, indicate on the building plans that the feature below has been incorporated into the design of the building(s). Proper installation of these features shall be verified by the City of Carson Department of Building and Safety prior to issuance of a certificate of occupancy.

- For multifamily dwellings, electric vehicle charging shall be provided as specified in Section A4.106.8.2 (Residential Voluntary Measures) of the CALGreen Code (or its successor code).

MM AQ-5: Applicants for new non-residential development projects within the Planning Area that are subject to CEQA (California Environmental Quality Act) review (i.e., non-exempt projects) and that exceed the South Coast Air Quality Management District significance thresholds during operations shall, prior to issuance of a building permit for new development projects within the Planning Area, indicate on the building plans that the features below have been incorporated into the design of the building(s). Proper installation of these features shall be verified by the City of Carson Department of Building and Safety prior to issuance of a certificate of occupancy.

- Preferential parking for low-emitting, fuel-efficient, and carpool/van vehicles shall be provided as specified in Section A5.106.5.1 (Nonresidential Voluntary Measures) of the CALGreen Code (or its successor code).
- Facilities shall be installed to support future electric vehicle charging at each nonresidential building with 30 or more parking spaces. Installation shall be consistent with Section A5.106.5.3 (Nonresidential Voluntary Measures) of the CALGreen Code (or its successor code).

Significance After Mitigation

The Project would result in a significant and unavoidable impact with respect to a cumulatively considerable net increase of a criteria pollutant for which the region is non-attainment under an applicable federal or state ambient air quality standard. Implementation of Mitigation Measure(s) MM AQ-1 through MM AQ-5 stated above would help to reduce the severity of the impact. However, even with implementation of these measures, this impact would remain significant and unavoidable.

Expose Sensitive Receptors to Substantial Pollutant Concentrations

Threshold AQ-3: The Project would have a significant impact if future development allowed by Carson2040 would expose sensitive receptors to substantial pollutant concentrations.

Impact AQ-3: *The Project would expose sensitive receptors to substantial pollutant concentrations. (Significant and Unavoidable)*

Criteria air pollutant emissions have the potential to result in health impacts on sensitive receptors located near new development within the Planning Area. As discussed previously, localized impacts are associated with on-site project activities. In addition to these localized impacts, vehicle travel associated with the Planning Area has the potential to result in exposure of sensitive receptors to CO emissions from intersection congestion. Based on the nature and extent

of new development, nearby sensitive receptors could be exposed to levels of toxic air contaminants that could result in a potential increase in cancer, acute, and/or chronic risk.

Construction

Construction of future individual projects under the Project has the potential to create localized air quality impacts through the use of heavy-duty construction equipment and through vehicle trips generated by construction workers and haul trips traveling to and from the project site. In addition, fugitive dust emissions would result from construction activities. During the finishing phase, the application of architectural coatings (i.e., paints) and other building materials would release VOCs. 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.

The SCAQMD provides guidance for conducting the analysis of localized emissions in their *Localized Significance Threshold Methodology* (June 2003, revised July 2008), which relies on on-site mass emission rate screening tables and project-specific dispersion modeling typically for sites sized one, two, and five acres. The SCAQMD has established screening criteria that can be used to determine the maximum allowable daily emissions that would satisfy the localized significance thresholds and therefore not cause or contribute to an exceedance of the applicable ambient air quality standards without project-specific dispersion modeling. The screening criteria depend on: (1) the area in which the project is located, (2) the size of the project area, and (3) the distance between the project area and the nearest sensitive receptor. The localized significance thresholds are applicable to NO_x, CO, PM₁₀, and PM_{2.5}. Example screening localized significance thresholds for projects 5 acres in size located within 25 meters of the nearest sensitive receptors for SRA 4 and SRA 12 are listed in Section 3.2.4, above. Should individual projects exceed applicable screening level thresholds in the SCAQMD *Localized Significance Threshold Methodology* (or successor guidance document), project-specific dispersion modeling may be conducted to demonstrate that no exceedance of the concentration-based thresholds (from which the screening tables are derived) would occur.

Concentrations of TACs, or in federal parlance, HAPs, are also used as indicators of ambient air quality conditions. Sensitive receptors maybe located within close proximity to future projects under the Project. SCAQMD recommends that construction health risk assessments be conducted for substantial sources of diesel particulate matter (DPM) emissions (e.g., projects with substantial construction activities, such as earth-moving and excavation construction activities) in proximity to sensitive receptors and has provided guidance for analyzing mobile source diesel emissions. Localized DPM emissions strongly correlate with localized PM_{2.5} emissions. However, localized analysis does not directly measure health risk impacts. Therefore, future projects under the Project may potentially require project-specific dispersion modeling to evaluate potential health risk impacts associated with construction.

However, there are no specific projects currently approved or proposed under the Project and there is no information regarding specific development projects, including specific buildings and facilities proposed to be constructed, construction schedules, quantities of grading, and other information that would be required in order to provide a meaningful estimate of emissions. Since this information is unknown, emissions modeling is not feasible and would be speculative at best. Each future project

developed under the Project would be required to conduct their own CEQA analysis and would determine significance based on the individual project's specifics. Through each project's individual environmental review process, localized emissions may be quantified and compared against project-specific thresholds. Individual projects that exceed the thresholds would normally be considered significant and require mitigation. Because potential new development could occur close to existing sensitive receptors, the development that would be accommodated by the proposed General Plan update has the potential to expose sensitive receptors to substantial pollutant concentrations. Construction equipment exhaust combined with fugitive particulate matter emissions has the potential to expose sensitive receptors to substantial concentrations of criteria air pollutant emissions or DPM and result in a potentially significant impact.

Operational

Local Air Quality

The SCAQMD recommends the evaluation of localized air quality impacts on sensitive receptors in the immediate vicinity of a project. However, the impacts are based on specific equipment and operations. Because the exact nature, location, and operation of the future developments are unknown, quantification of potential localized operational impacts and health risks would not be feasible and would be speculative. Land uses that have the potential to generate substantial stationary sources of emissions that would require a permit from SCAQMD include industrial land uses, such as chemical processing facilities and gasoline-dispensing facilities. Warehouses and distribution centers may generate substantial DPM emissions from off-road equipment use and truck idling. Under the Project, industrial-type land uses such as the aforementioned land uses may be permitted within the Planning Area. As operation of some of these future developments may occur within proximity to sensitive receptors, there is the potential for localized emissions to exceed the significance thresholds and result in a potentially significant impact.

The proposed General Plan policies, listed below, would potentially reduce emissions, which could potentially address impacts. In addition, future development under the proposed General Plan update would be required to conduct their own CEQA analysis and would determine significance based on the individual project specifics. Through each project's individual environmental review process, potential impacts would be identified and compared against relevant thresholds. Individual projects that exceed the thresholds would normally result in a potentially significant impact and require mitigation.

Intersection Hotspot Analysis

The potential for the Project to cause or contribute to CO hotspots is evaluated by comparing project intersections (both intersection geometry and traffic volumes) with prior studies conducted by SCAQMD in support of their AQMPs and considering existing background CO concentrations. As discussed below, this comparison demonstrates that the Project would not cause or contribute considerably to the formation of CO hotspots, that CO concentrations at project intersections would remain well below the ambient air quality standards, and that no further CO analysis is warranted or required.

As shown previously in Table 3.2-2, CO levels in the Planning Area are substantially below the federal and state standards. Maximum CO levels in recent years are 3.0 to 6.1 ppm (1-hour

average) and 2.1 to 4.6 ppm (8-hour average). CO levels decreased dramatically in the Air Basin with the introduction of the catalytic converter in 1975. No exceedances of CO have been recorded at monitoring stations in the Air Basin since 2003⁷⁸ and the Air Basin is currently designated as a CO attainment area for both the CAAQS and NAAQS. Thus, it is not expected that CO levels at Project-impacted intersections would rise to the level of an exceedance of these standards.

Additionally, SCAQMD conducted CO modeling for the 2003 AQMP for the four worst-case intersections in the Air Basin: (1) Wilshire Boulevard and Veteran Avenue; (2) Sunset Boulevard and Highland Avenue; (3) La Cienega Boulevard and Century Boulevard; and (4) Long Beach Boulevard and Imperial Highway. In the 2003 AQMP, SCAQMD notes that the intersection of Wilshire Boulevard and Veteran Avenue is the most congested intersection in Los Angeles County, with an average daily traffic volume of approximately 100,000 vehicles per day. This intersection is located near the on- and off-ramps to Interstate 405 in West Los Angeles. The evidence provided in the 2003 AQMP shows that the peak modeled CO concentration due to vehicle emissions at these four intersections was 4.6 ppm (1-hour average) and 3.2 (8-hour average) at Wilshire Boulevard and Veteran Avenue. When added to the existing background CO concentrations, the screening values would be up to 10.7 ppm (1-hour average) and 7.8 ppm (8-hour average). Based on the intersection volumes identified at these modeled intersections, if a project's traffic levels exceed 100,000 vehicles per day at any project impacted intersection, there would be the potential for a significant impact and dispersion modeling would need to be conducted to determine the project level impact.

Based on roadway segment volumes under the buildout horizon, the roadway segment with the maximum potential peak traffic for eastbound and westbound traffic would be that of Del Amo Boulevard between Central Avenue and Alameda Street for eastbound and westbound traffic. For northbound and southbound traffic, the roadway segment with the maximum potential peak traffic would be that of Wilmington Avenue between 230th Street and Sepulveda Boulevard. These segments represent the largest east/westbound and north/southbound traffic in the city of Carson. While these roadway segments do not in fact intersect, even assuming that these traffic volumes would occur at an intersection, they combined would have a peak roadway intersection volume of approximately 61,860 vehicles per day, which would be below the 100,000 vehicles per day modeled in SCAQMD's 2003 AQMP CO attainment demonstration. Furthermore, CO emissions from vehicles have substantially reduced compared to 2003 era vehicles based on improved vehicle emissions standards. As a result, CO concentrations are expected to be less than those estimated in the 2003 AQMP, which would not exceed the applicable thresholds. Thus, this comparison demonstrates that the Project would not contribute considerably to the formation of CO hotspots and no further CO analysis is required. The Project would result in a less than significant impact with respect to CO hotspots.

Toxic Air Contaminants

Construction and operation of the Project would result in emissions of TAC, predominantly from diesel particulate emissions from on- and off-road vehicles during construction and from the

⁷⁸ SCAQMD, 2017, *Final 2016 AQMP*, March 2017, page 2-38.

operation of diesel fueled equipment or generators during operational activities. Because the exact nature, location, and operation of the future developments are unknown, and because health risk impacts from TACs are cumulative over the life of the nearby receptors, quantification of potential health risks would be speculative. However, as construction and operation of these future developments may occur within close proximity to sensitive receptors, there is the potential for risk to exceed regulatory levels. Therefore, health risk with respect to the development anticipated by the Project would be potentially significant.

Health Impacts

Because regional emissions exceed the SCAQMD regulatory thresholds during construction and operational activities, there is the potential that these emissions would exceed the CAAQS and NAAQS thus resulting in a health impact. Without knowing the exact specifications for all projects that may be developed under the proposed General Plan update, there is no way to accurately calculate the potential for health impacts from the overall Project. Individual projects will be required to provide their own environmental assessments to determine health impacts from the construction and operation of their projects. Because there is no way to determine the potential for these projects to affect health of sensitive receptors within the City of Carson, the Project would result in a potentially significant health impact.

Proposed General Plan Policies that Address the Impact

Guiding Policies include CIR-G-2, CIR-G-3, CIR-G-4, CHE-G-2, OSEC-G-17, OSEC-G-18, OSEC-G-20, and OSEC-G-21, and Implementing Policies include CIR-P-1, CIR-P-2, CIR-P-3, CIR-P-4, CIR-P-21, CIR-P-22, CIR-P-23, CIR-P-24, CIR-P-25, CIR-P-32, CIR-P-33, CHE-P-5, OSEC-P-33, OSEC-P-36, OSEC-P-43, OSEC-P-47, OSEC-P-48, and OSEC-P-49, as discussed under Impact AQ-1, in addition to the following:

Land use and Revitalization

Guiding Policies

- | | |
|----------|--|
| LUR-G-5 | Provide opportunities for new residential development in a variety of settings, including through infill and redevelopment, without impacting existing neighborhoods or creating conflicts with industrial operations, while conserving mobile homes as much as possible, which provide more affordable housing. |
| LUR-G-10 | Provide lands to accommodate a wide range of light industrial uses including research and development, manufacturing, agricultural processing, and logistics near transportation corridors in areas where low- to moderate intensity operations would be sufficiently buffered. |
| LUR-G-13 | Ensure adequate buffers and transitions between industrial and residential land uses as sites are developed or redeveloped. |
| LUR-G-14 | Ensure that future industrial development is in harmony to the extent possible with adjacent residential areas. To this end, new logistics buildings must have easy access to freeways and the Alameda corridor to prevent trucks passing on truck routes next to residential areas. |

Heavy trucking uses cause a significant amount of noise and vibration to residential areas, in some cases 24/7. This disproportionately impacts the health of these residents, including worsening air quality due to emissions, loud noises from the engines, and vibrations from the trucks.

Implementing Policies

- LUR-P-17 Ensure that new industrial uses in the Business Mixed-Use designation minimize adverse off site air quality, noise, or glare impacts incompatible with permitted residential.
- LUR-P-19 Provide lands to accommodate a wide range of light industrial uses including research and development, manufacturing, and agricultural processing near transportation corridors in areas where low- to moderate intensity operations would be sufficiently buffered. Logistics and other heavy trucking uses shall be limited to industrial areas that provide direct access to freeways and the Alameda corridor.
- LUR-P-22 When industrial land directly adjacent to existing or permitted residential, parks, schools or other sensitive uses is developed or intensified, require a buffer of natural vegetation, open space, berms, and trees between the new residential development and industrial land. Other operation factors, including hours of operation, traffic, noise, and air quality impacts, shall be assessed and mitigated at time of project review.

Details of this would need to be developed as part of the Zoning Code. The buffer can help ameliorate visual impacts, and prevent reduce impacts related to light and glare, and potentially noise and air quality.

Community Health and Environmental Justice

Guiding Policies

- CHE-G-2 Protect community health from pollution by toxics and hazardous materials, especially in areas with vulnerable or sensitive populations.

Implementing Policies

- CHE-P-4 Continue to enforce zoning and design standards that protect sensitive uses from the encroachment of land uses that would result in impacts from noxious fumes or toxins.
- CHE-P-8 Avoid new toxin sources by stringently evaluating the siting of facilities that might significantly increase pollution, especially near already disproportionately impacted communities.

Mitigation Measures

MM AQ-6: Applicants for new development projects within the Planning Area that are subject to CEQA (California Environmental Quality Act) review (i.e., non-exempt projects) and are within one-quarter mile (1,320 feet) of a sensitive land use shall, prior to issuance of a building permit, submit a construction-related air quality study that evaluates potential localized project construction-related air quality impacts to the City of Carson Planning Department for review and approval. The evaluation shall be prepared in conformance with South Coast Air Quality Management District (SCAQMD) methodology for assessing localized significance thresholds (LST) air quality impacts. If construction-related criteria air pollutants are determined to have the potential to exceed

the SCAQMD-adopted thresholds of significance, the City shall require that applicants for new development projects incorporate mitigation measures to reduce air pollutant emissions during construction activities. These identified measures shall be incorporated into all appropriate construction documents (e.g., construction management plans) submitted to the City and shall be verified by the City's Planning Department.

MM AQ-7: Applicants for new development projects within the Planning Area that are subject to CEQA (California Environmental Quality Act) review (i.e., non-exempt projects) and are within one-quarter mile (1,320 feet) of a sensitive land use shall, prior to issuance of a building permit, submit a construction-related air quality study that evaluates potential health risk impacts to the City of Carson Planning Department for review and approval. The evaluation shall be prepared in conformance with South Coast Air Quality Management District (SCAQMD) methodology for assessing health risk impacts. If health risk impacts are determined to have the potential to exceed the SCAQMD-adopted thresholds of significance, the City shall require that applicants for new development projects incorporate mitigation measures to reduce air pollutant emissions during construction activities. These identified measures shall be incorporated into all appropriate construction documents (e.g., construction management plans) submitted to the City and shall be verified by the City's Planning Department.

Significance After Mitigation

The Project would result in a significant and unavoidable impact with respect to the exposure of sensitive receptors to substantial pollutant concentrations during construction and operations due to potential development generating substantial emissions in proximity to sensitive receptors. Implementation of Mitigation Measure(s) MM AQ-6 and MM AQ-7 stated above would help to reduce the severity of the impact. However, even with implementation of these measures, this impact would remain significant and unavoidable.

Result in Other Emissions (such as those leading to Odors)

Threshold AQ-4: The Project would have a significant impact if future development allowed by Carson2040 would result in other emissions (such as those leading to odors) affecting a substantial number of people.

Impact AQ-4: *The Project would result in other emissions (such as those leading to odors) affecting a substantial number of people. (Significant and Unavoidable)*

Construction

Potential sources that may emit odors during construction activities include the use of architectural coatings and solvents. SCAQMD Rule 1113 (Architectural Coatings) limits the amount of VOCs from architectural coatings and solvents. According to the SCAQMD CEQA Air Quality Handbook, construction equipment is not a typical source of odors. Odors from the combustion of diesel fuel would be minimized by complying with the CARB ATCM that limits diesel-fueled commercial vehicle idling to five minutes at any given location, which was adopted in 2004. The Project would also comply with SCAQMD Rule 402 (Nuisance), which prohibits the emissions of nuisance air contaminants or odorous compounds. Through adherence with mandatory compliance with SCAQMD Rules and state measures, construction activities and

materials would not create objectionable odors. Construction of the Project's uses would not be expected to generate nuisance odors at nearby air quality sensitive receptors.

However, even with mandatory compliance with CARB and SCAQMD rules regulations, it is possible that some future development projects could be large in scale and/or intensity such that many pieces of heavy-duty construction equipment and/or heavy-duty trucks may be required and that construction period emissions could exceed the SCAQMD significance thresholds for attainment, maintenance or unclassified pollutants. Therefore, project-related construction activities could result in a significant air quality impact with respect to other emissions.

Operational

The Project's land uses are related to growth in residential, office, retail/restaurant, commercial, and park land uses and are not expected to introduce substantial sources of other emissions, including odors. According to the SCAQMD CEQA Air Quality Handbook, land uses associated with odor complaints typically include agricultural uses, wastewater treatment plants, food processing plants, chemical plants, composting, refineries, landfills, dairies, and fiberglass molding. The Project could result in future development of commercial or industrial land uses that could generate odors. Additionally, even with mandatory compliance with CARB and SCAQMD rules regulations, it is possible that some future development projects could be large in scale and/or intensity such that many heavy-duty trucks may be required and that operational period emissions could exceed the SCAQMD significance thresholds for attainment, maintenance or unclassified pollutants. Therefore, project-related operational activities could result in a significant air quality impact with respect to other emissions.

Proposed General Plan Policies that Address the Impact

Guiding Policies LUR-G-2, LUR-G-4, LUR-G-6, LUR-G-7, LUR-G-9, LUR-G-11, CIR-G-1, CIR-G-2, CIR-G-3, CIR-G-4, CHE-G-8, OSEC-G-17, OSEC-G-18, OSEC-G-19, OSEC-G-20, OSEC-G-21, and OSEC-G-22, and Implementing Policies LUR-P-1, LUR-P-8, LUR-P-11, LUR-P-12, LUR-P-13, LUR-P-16, LUR-P-18, LUR-P-24, CIR-P-1, CIR-P-2, CIR-P-3, CIR-P-4, CIR-P-16, CIR-P-17, CIR-P-19, CIR-P-20, CIR-P-21, CIR-P-22, CIR-P-23, CIR-P-24, CIR-P-25, CIR-P-26, CIR-P-27, CIR-P-32, CIR-P-33, CIR-P-34, CHE-P-5, OSEC-P-33, OSEC-P-34, OSEC-P-35, OSEC-P-36, OSEC-P-43, OSEC-P-46, OSEC-P-47, OSEC-P-48, and OSEC-P-49, as discussed under Impact AQ-1.

Mitigation Measures

See MM AQ-1 through MM AQ-6.

Significance After Mitigation

The Project would result in a significant and unavoidable impact with respect to other emissions (such as those leading to odors) during construction or operation. Implementation of Mitigation Measure(s) MM AQ-1 through MM AQ-7 stated above would help to reduce the severity of the impact. However, even with implementation of these measures, this impact would remain significant and unavoidable.

3.2.5 Cumulative Impact Analysis

The SCAQMD recommends using two methodologies to assess the cumulative impact of air quality emissions: (1) a project’s consistency with the current AQMP be used to determine its potential cumulative impacts. or (2) that project-specific air quality impacts be used to determine the project’s potential cumulative impacts to regional air quality.⁷⁹

Consistency with Air Quality Management Plan

The SCAQMD recommends assessing a project’s cumulative impacts based on whether the project is consistent with the current AQMP. CEQA Guidelines Section 15064(h)(3) provides guidance in determining the significance of cumulative impacts. Specifically, CEQA Guidelines Section 15064(h)(3) states in part that:

“A lead agency may determine that a project’s incremental contribution to a cumulative effect is not cumulatively considerable if the project will comply with the requirements in a previously approved plan or mitigation program which provides specific requirements that will avoid or substantially lessen the cumulative problem (e.g., water quality control plan, air quality plan, integrated waste management plan) within the geographic area in which the project is located. Such plans or programs must be specified in law or adopted by the public agency with jurisdiction over the affected resources through a public review process to implement, interpret, or make specific the law enforced or administered by the public agency ...”

For purposes of the cumulative air quality analysis with respect to CEQA Guidelines Section 15064(h)(3), the Project’s cumulative air quality impacts are determined not to be significant based on its consistency with the SCAQMD’s adopted 2016 AQMP. As discussed above in Impact AQ-1, the City’s proposed General Plan update would not conflict with AQMP construction, land use, and transportation strategies that are intended to reduce construction emissions, VMT, and resulting regional mobile source emissions. In addition, construction and operation would not conflict with growth projections as the City of Carson continues to coordinate with SCAQMD and SCAG to ensure city-wide growth projections, land use planning efforts, and local development patterns are accounted for in the regional planning and air quality planning processes. As such, a cumulative impact would be less than significant under this criterion.

Project-Specific Impacts

The SCAQMD CEQA Air Quality Handbook states that the “Handbook is intended to provide local governments, project proponents, and consultants who prepare environmental documents with guidance for analyzing and mitigating air quality impacts of projects.”⁸⁰ The SCAQMD CEQA Air Quality Handbook also states that “[f]rom an air quality perspective, the impact of a project is determined by examining the types and levels of emissions generated by the project and

⁷⁹ SCAQMD, 2003, *White Paper on Potential Control Strategies to Address Cumulative Impacts from Air Pollution*, Appendix D.

⁸⁰ SCAQMD, 1993, *CEQA Air Quality Handbook*, April 1993, page iii.

its impact on factors that affect air quality. As such, projects should be evaluated in terms of air pollution thresholds established by the District.”⁸¹ The SCAQMD has provided guidance on addressing the cumulative impacts for air quality, as discussed below:⁸²

“As Lead Agency, the AQMD uses the same significance thresholds for project specific and cumulative impacts for all environmental topics analyzed in an Environmental Assessment or EIR... Projects that exceed the Project-specific significance thresholds are considered by the SCAQMD to be cumulatively considerable. This is the reason project-specific and cumulative significance thresholds are the same. Conversely, projects that do not exceed the project-specific thresholds are generally not considered to be cumulatively significant.”

The SCAQMD recommends evaluating cumulative impacts for individual projects based on whether the project exceeds the SCAQMD’s recommended daily thresholds for project-specific impacts for those pollutants for which the Air Basin is in non-attainment. Thus, the cumulative analysis of air quality impacts follows SCAQMD’s guidance such that construction or operational Project emissions would be considered cumulatively considerable if Project-specific emissions exceed an applicable SCAQMD recommended significance threshold. As discussed above in Impact AQ-2, future development that may occur under the proposed General Plan update may result in construction or operational emissions that could exceed the SCAQMD significance thresholds. Implementation of Mitigation Measure(s) MM AQ-1 through MM AQ-5 stated above would help to reduce the severity of the impacts. However, even with implementation of these measures, the cumulative impact would remain significant and unavoidable.

⁸¹ SCAQMD, 1993, *CEQA Air Quality Handbook*, April 1993, page 6-1.

⁸² SCAQMD, 2003, *White Paper on Potential Control Strategies to Address Cumulative Impacts from Air Pollution*, Appendix D.

3.3 Biological Resources

3.3.1 Introduction

This section provides an analysis of potential environmental impacts on existing biological resources from future development allowed under the Project, including those related to sensitive species and/or habitats, riparian or streamside resources under the jurisdiction of federal or state agencies, and adopted regulations or policies. The section describes biological resources in the Planning Area, including habitats, wetlands, critical habitat, and special-status species, as well as relevant federal, state, and local regulations and programs.

Comments received in response to the Notice of Preparation (NOP) and Recirculated NOP regarding topics covered in this section include the following:

- That the Draft EIR should evaluate the project's impact to rare and endangered species and vegetation.
- The City of Carson (City) should consider preparing an inventory of all areas of biological importance, including but not limited to conservation easements or mitigation lands, areas under U.S. Fish and Wildlife Service (USFWS) jurisdiction, sensitive natural communities, aquatic and riparian resources, and urban forests, and avoid these areas to greatest extent possible. If avoidance is not feasible, the California Department of Fish and Wildlife (CDFW) recommends that the Draft EIR include mitigation measures where future development is facilitated under the Project to reduce impacts to these biological areas to the greatest extent possible. Future biological studies for each specific biological resource is strongly encouraged to ensure all biological resources are identified and avoided or mitigated with development of projects under the General Plan.
- The Project should avoid or mitigate to the greatest extent possible all impacts associated with wetland resources, especially the Dominguez Gap Wetlands, in accordance with the regulations and stipulations contained in the Fish and Game Code.
- The Project should avoid or mitigate to the greatest extent possible all impacts associated with nesting birds in accordance with the regulations and stipulations contained in the Fish and Game Code and the Federal Migratory Bird Treaty Act. In addition, the Project should also avoid or mitigate to the greatest extent possible all impacts associated with loss of birds and raptor nesting habitats, including the removal of any native trees, large and dense-canopied native and non-native trees, trees occurring in high density, and any trees protected by the City's Heritage Tree Program and Tree Ordinance.
- The Project should avoid or mitigate to the greatest extent possible all impacts associated with bats, including any trees or structures which bats may roost in.

3.3.2 Environmental Setting

Physical Setting

The Planning Area includes the city of Carson and its Sphere of Influence (SOI), which is bounded by East Alondra Boulevard and the city of Compton on the north, the city of Long Beach on the east, the Los Angeles neighborhood of Wilmington on the south, and Interstate 110 (I-110) and South Figueroa Street on the west. The Planning Area comprises approximately

12,120 acres, or about 18.9 square miles, including all of the city of Carson (10,151 acres) as well as 1,969 acres of unincorporated land within the city's SOI.

Topographically, much of the city is relatively flat, with elevations ranging from 10 feet above mean sea level (AMSL) at the southeast corner of the city to 195 feet ASML in the Dominguez Hills area in the northeast portion of the city. The city is primarily a developed urban environment and is bisected by the concrete-lined Dominguez Channel, which flows through the center of the city from northwest to southeast. The majority of land within the Planning Area is developed primarily with industrial uses as well as with residential communities, commercial businesses, schools, roads, and small parks. There are very few natural biological resources remaining within the city's limits.

Vegetation and Other Land Cover Types

Based on a review of aerial photography, four primary biological areas were identified within the city, each of which may support biological resources. These four areas are regulated by state and federal statutes, or should otherwise be addressed as part of environmental review for future entitlements. These areas include:

1. Dominguez Channel Branch is an unimproved drainage originating within the Carson Harbor Village Mobile Home Park in the northwest part of the city. Within the mobile home park, the drainage contains approximately 17 acres of riparian woodland and potential wetlands. The drainage then flows south into a concrete-line channel and transitions into a vegetated channel within The Links at Victoria Golf Course that is landscaped with ornamental vegetation and/or grass lawns;
2. Wilmington Drain (also known as Canada de Palos Verdes Creek), which is located immediately east of I-110 (Harbor Freeway) in the southwest part of the city. While most or all of the Wilmington Drain reach within the city is concrete-lined, this drainage abuts the Bixby Marshland, a 17-acre open space area located to the northwest of the Joint Water Pollution Control Plant near the intersection of Figueroa Street and Sepulveda Boulevard. This wetland area was restored and is maintained by the Los Angeles County Sanitation Districts;
3. The Dominguez Channel, which is an improved concrete-lined channel that appears to support some limited vegetation located west of I-710 (Long Beach Freeway) in the easternmost part of the city; and
4. Compton Creek, a concrete-lined channel with low-growing vegetation along the bottom of the channel, within the city's SOI to the northeast.

To varying extents, these undeveloped areas within the city, contain native and non-native woodland vegetation that may provide habitat for wildlife species. Additionally, there are some undeveloped disturbed areas consisting of non-native grasslands and forbs, or areas that generally lack vegetation due to previous human disturbances. The vegetation communities are described in greater detail below.

Mixed-Riparian Woodland

Mixed riparian woodland consists of planted or naturalized, non-native trees intermixed with native tree and shrub species. Species within this community include native willows (*Salix* spp.), mule fat (*Baccharis salicifolia*), and non-native carrotwood (*Cupaniopsis anacardioides*), ash (*Fraxinus uhdei*), Mexican fan palm (*Washingtonia robusta*), ornamental pines (*Pinus* sp.), Peruvian pepper (*Schinus molle*), and castor bean (*Ricinus communis*). Within the city, mixed riparian woodland occurs within the riparian woodland in the Carson Harbor Village Mobile Home Park in the northwest part of the city, as well as within a portion of The Links at Victoria Golf Course where the unnamed drainage flows to the south and becomes an unimproved, earthen-bottomed stream before it outlets into Dominguez Channel. This community also occurs within the area east of Wilmington Drain.

Non-Native Woodland

Non-native woodland typically consists of planted, non-native trees, often characterized by a dominance of eucalyptus (*Eucalyptus* spp.). Other non-native species found in association with this community include Mexican fan palm, ornamental pines, other eucalyptus species, bougainvillea (*Bougainvillea* sp.), tree tobacco (*Nicotiana glauca*), and Russian thistle (*Salsola tragus*). Within the city, non-native woodland occurs along the Wilmington Drain just east of I-110 (Harbor Freeway) in the southwest part of the city.

Open Water

Open water occurs within improved drainages that are concrete-lined channels with standing water. There is generally no vegetation associated with these areas, however, portions of these channels may support some limited vegetation rooted in accumulated sediment on top of the concrete channel invert, or growing up through cracks in the concrete lining, and often located near outfall structures. Within the city, this community is found within the unnamed drainage south of Carson Harbor Village Mobile Home Park, Wilmington Drain, Dominguez Channel, and Compton Creek.

Non-Native Grassland

Non-native grassland consists of dense to sparse annual grasses less than three feet high, typically dominated by brome (*Bromus* spp.) and oat (*Avena* spp.) species. Non-native grassland is located in the western portion of the city, south of Del Amo Boulevard.

Disturbed

Disturbed areas support little to no vegetation and have been physically altered by previous human activity and are therefore no longer able to support a recognizable native or naturalized vegetation association. The soil is often highly compacted or frequently disturbed. Although the majority of the city is developed, there are a few fragmented patches of disturbed areas found within the central and southern portions of the city, including areas around Shell Oil Products and the Goodyear Blimp Base Airport.

Developed

Developed/urban and suburban areas have been physically altered to the point where they can no longer support native vegetation. The land cover type includes areas with permanent or semi-permanent structures, pavement or other hardscape, and landscaped areas that require irrigation. Developed land constitutes the majority of the land throughout the city limits as well as localized areas of the SOI. It includes industrial uses, residences, businesses, schools, parks, freeways and other roads, sidewalks, and irrigated landscapes. Within the areas called out as developed land cover, there may be some oak trees, walnut trees, or other small pockets of native habitat. However, these pockets are generally too small and isolated to support other than urban- and suburban-adapted wildlife species.

Wildlife

While there is relatively little native habitat remaining within the Planning Area's limits, the vegetation communities discussed above provide habitat for some species of wildlife, particularly those wildlife species that are highly tolerant of urban environments, such as avian species that have adapted to living within or adjacent to developed areas. These habitats within the Planning Area provide foraging and cover habitat for year-round and seasonal avian residents including songbirds, perching birds and running birds. Avian species commonly observed within the Planning Area include, the tricolored blackbird (*Agelaius tricolor*), house finch (*Haemorhous mexicanus*), black Phoebe (*Sayornis nigricans*), Cooper's hawk (*Accipiter cooperii*), Allen's hummingbird (*Selasphorus sasin*), northern mockingbird (*Mimus polyglottos*), and the mourning dove (*Zenaida macroura*), among others.

Reptiles that may be found within the Planning Area include primarily common, cosmopolitan species such as the southern alligator lizard (*Elgaria multicarinata*).

Mammal species expected within the Planning Area consist of several common, cosmopolitan rodent species as well as the western mastiff bat (*Eumops perotis californicus*).

Furthermore, large open spaces will generally support a diverse wildlife community representing a variety of species, whereas more constrained areas present only limited opportunities for species variation. It is assumed that a variety of amphibians, reptiles, birds, and mammals may be present in these areas, particularly within the riparian woodland communities and the isolated patches of riparian woodland habitat remaining within the city, within The Links at Victoria Golf Course; Wilmington Drain; Dominguez Channel; and Compton Creek within the city's SOI to the northeast.

Jurisdictional Waters and Wetlands

The Planning Area is located within the Dominguez Creek Watershed, and is primarily supplied by the Dominguez Channel, which bisects the Planning Area. The Dominguez Channel flows into the Los Angeles Harbor and ultimately empties into the Pacific Ocean. In addition, approximately 17 acres of potential wetlands currently exist within a tributary to Dominguez Channel, the Dominguez Branch Channel at the Carson Harbor Village Mobile Home Park located within the northwest portion of the city. Riparian habitat has been identified within this area and is currently protected

with deed restrictions to protect the riparian habitat or other sensitive natural communities that may be present. The Wilmington Drain passes within the Planning Area, including the Bixby Marshland area. Finally, a small reach of Compton Creek passes through the city.

Dominguez Channel

The Dominguez Channel is a perennial, concrete-lined flood control channel that conveys flows from an approximately 130-square-mile area in the southern Los Angeles basin towards the Pacific Ocean. There is a clear hydrological connection between the Dominguez Channel and the Pacific Ocean downstream. Dominguez Channel is approximately 24 kilometers (15 miles) long and is fed by several tributary channels, most notably the Torrance Lateral, Del Amo Lateral, Victoria Creek, and the 132nd and 135th Street drains. The limits of potential U.S. Army Corps of Engineers (USACE) jurisdiction were mapped for the channel bottom of the Dominguez Channel that perennially contains flowing surface water and measured from the approximate toe of slope on the west bank to the toe of slope of the east bank. The average width for Waters of the United States within the Dominguez Channel is 130 feet. Due to the lack of any earthen substrate or hydrophytic vegetation, the Dominguez Channel does not contain the two of the three parameters (i.e., hydrology, hydric soils and hydrophytic vegetation) required to be considered a federal wetland. No biological resources occur within, and few resources are associated with, the upper Dominguez Channel or its tributary channels (132nd and 135th Street drains), which are concrete-lined. The tributary channels (i.e., Torrance and Del Amo Laterals, Victoria Creek) to the lower watershed are concrete-lined and lack biological resources.¹

Dominguez Branch Channel

The Dominguez Branch Channel is an ephemeral drainage feature that is hydrologically connected to the Dominguez Channel. This ephemeral drainage feature conveys upland runoff from the study area and urban development upstream of the site, downstream in a channelized and sometimes earthen-bottom trapezoidal feature, crossing below several roads through culverts, and eventually draining into the Pacific Ocean. The Dominguez Branch Channel is mapped as a riverine feature by the USFWS NWI.

Wilmington Drain

Canada De Palos Verdes is a channel that feeds into Machado Lake from the north, but is more commonly referred to as the Wilmington Drain. The Wilmington Drain is concrete-lined from its origin south of Sepulveda Boulevard (between Normandie and Vermont Avenues) to where it crosses under the I-110 Freeway north of Lomita Boulevard. Consequently, the channel has little biological value in its upstream reach located within the city. However, as noted above, Wilmington Drain abuts the Bixby Marshland, a 17-acre open space area located to the northwest of the Joint Water Pollution Control Plant near the intersection of Figueroa Street and Sepulveda Boulevard. This wetland area was restored and is maintained by the Los Angeles County Sanitation Districts. Downstream, and outside the city, the channel is soft bottom with earthen banks from where it passes beneath the I-110 Freeway (just north of Lomita Boulevard) to where

¹ Los Angeles County Department of Public Works (LADPW), 2004. *Dominguez Watershed Master Plan*. Page 2-184. Adopted June 2016. Available: <https://www.ladpw.org/wmd/watershed/dc/DCMP/docs/Section%20%20Background%20Information%20Report.pdf>. Accessed April 12, 2021.

it empties into Machado Lake south of the City’s Planning Area. This area has been designated as the Wilmington Drain Waterway and Wildlife Area by the Los Angeles County Flood Control District. This area has been characterized as 65 percent mature riparian woodland, 5 percent riparian scrub, 15 percent freshwater marsh, and 15 percent ruderal (weedy) vegetation with medium biological value due to moderate presence of native riparian vegetation and wildlife, but with little to no adjacent natural open space.²

Critical Habitat

The U.S. Fish and Wildlife Service (USFWS) through the federal Endangered Species Act (FESA) defines critical habitat as “a specific geographic area(s) that contains features essential for the conservation of a threatened or endangered species and that may require special management and protection. Critical habitat may include an area that is not currently occupied by the species but that will be needed for its recovery.” There are no USFWS designated critical habitats within the Planning Area. The nearest critical habitat to the Planning Area is for the California gnatcatcher (*Polioptila californica*), located approximately three miles to the southwest.³

Sensitive Natural Communities

The Planning Area does not contain any vegetation communities considered sensitive by the CDFW as special status. However, any riparian habitat within the Planning Area would be considered jurisdictional by the regulatory agencies and would be considered to be ecologically sensitive, even if not formally designated by CDFW.

Wildlife Corridors

Wildlife movement corridors are generally defined as connections between blocks of habitat that allow for the physical movement and genetic exchange between otherwise isolated animal populations. Movement corridors may be local, such as between foraging and nesting or denning areas, or they may be regional in nature, allowing animals to access alternative territories as fluctuating dispersal pressure dictate. Within the Planning Area, limited wildlife movement is expected due to the prevalence of developed areas and lack of native habitats. However, particularly within the riparian woodland communities, these communities may support movement on a smaller or “local” scale for species of invertebrates, amphibians, reptiles, birds, and small-to-medium mammals, primarily those with high urban tolerance. The home range of many of these species may be entirely contained within the isolated patches of riparian woodland habitat remaining within the city. However, on a larger regional scale, movement is not expected except for some limited movement along the improved, channelized waterways that may attract avian species and urban-adapted wildlife following these aquatic resources to areas where patches of habitat may be present.

² BonTerra Consulting, 1997. Biological Resources Survey for 95 Soft-Bottom Channel Reaches. Prepared for the County of Los Angeles Department of Public Works Planning Division. November.

³ U.S. Fish and Wildlife Service (USFWS), 2017a. Critical Habitat Mapping. GIS files provided by USFWS. Accessed April 9, 2021, at https://www.arcgis.com/home/webmap/viewer.html?url=https://services.arcgis.com/QVENGdaPbd4LUkLV/ArcGIS/rest/services/USFWS_Critical_Habitat/FeatureServer&source=sd

Special-Status Species

Based on a review of the California Natural Diversity Data Base (CNDDDB), which contains records of the occurrences of special-status habitats and plant and animal species within California, there are no plant communities documented within the Planning Area's boundaries that are considered sensitive or of high priority for study by CDFW due to their scarcity and/or because they support special-status plant and wildlife species. The city also does not support USFWS designated critical habitat for any federally listed species (i.e., endangered or threatened species). However, there are a several special-status plant and wildlife species that have potential to occur within the Planning Area's limits.

Special-Status Plants

Special-status plants include those listed, or candidates for listing, by the USFWS and/or CDFW, as well as species considered sensitive by the California Native Plant Society (CNPS), particularly Rare Plant Ranks (CRPR) 1A, 1B, 2A, and 2B.⁴ Several special-status plant species were reported in the CNDDDB as recorded within a 10-quadrangle search of the Planning Area and surrounding area (Venice, Inglewood, South Gate, Whittier, Redondo Beach, Torrance, Long Beach, Los Alamitos, San Pedro, and Seal Beach U.S. Geological Survey [USGS] topographic quadrangles).⁵ However, the majority of these species are not expected to be present within the Planning Area's limits due to the prevalence of development, or because suitable habitat to support the species is not present. **Table 3.3-1, *Special-Status Plant Species***, provides a summary of the special-status plant species with a low, moderate, or high potential to occur within the Planning Area based upon their known geographic ranges, distributions, and preferred habitats.

Special-Status Wildlife

Special-status wildlife species include those species listed as endangered or threatened under the FESA or California Endangered Species Act (CESA), candidates for listing by USFWS or CDFW, and species that are considered State Species of Special Concern (SSC), Fully Protected, or on the Watch List of Special Animals by CDFW. Several special-status wildlife species were reported in the CNDDDB as recorded within a 10-quadrangle search of the city and surrounding area (Venice, Inglewood, South Gate, Whittier, Redondo Beach, Torrance, Long Beach, Los Alamitos, San Pedro, and Seal Beach USGS topographic quadrangles).⁶ However, the majority of these species are not expected to be present within the Planning Area's limits due to the prevalence of development, or because suitable habitat to support the species is not present. **Table 3.3-2, *Special-Status Wildlife Species***, provides a summary of the special-status wildlife species with a low, moderate, or high potential of occurring within the Planning Area based upon their known geographic ranges, distributions, and preferred habitats.

⁴ California Native Plant Society (CNPS), 2017. Inventory of Rare and Endangered Plants of California. California Native Plant Society. Available online (<http://cnps.web.aplus.net/cgi-bin/inv/inventory.cgi>). Accessed December 4, 2017.

⁵ California Department of Fish and Wildlife (CDFW), 2017. California Natural Diversity Database (available by subscription) and Rarefind. CDFW: Sacramento, California. Accessed December 1, 2017.

⁶ U.S. Fish and Wildlife Service (USFWS), 2017b. Species Occurrence Data. Provided by USFWS.

**TABLE 3.3-1
 SPECIAL-STATUS PLANT SPECIES**

Species	Federal/State/ CRPR Status	Habitat Requirements	Potential to Occur
Southern tarplant (<i>Centromadia parryi</i> ssp. <i>australis</i>)	1B.1	Marshes and swamps (margins), valley and foothill grassland, vernal pools. Often in disturbed sites near the coast at marsh edges; also in alkaline soils sometimes in association with saltgrass.	High. In 2009, this species was documented to occur within the city scattered along both banks of Dominguez Channel on either side of Interstate 110, north of Interstate 405.

NOTES:

CNPS Status – CRPR

- 1A: Plants presumed extinct in California
- 1B: Plants rare, threatened, or endangered in California and elsewhere
- 2: Plants rare, threatened, or endangered in California but more common elsewhere
- 3: Plants about which more information is needed – a review list

Threat Codes:

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

SOURCES: California Department of Fish and Wildlife, 2017. *California Natural Diversity Database (available by subscription) and Rarefind*. CDFW: Sacramento, California. Accessed December 1, 2017; California Native Plant Society (CNPS), 2017. Inventory of Rare and Endangered Plants of California. Available: <http://cnps.web.aplus.net/cgi-bin/inv/inventory.cgi>. Accessed December 4, 2017; U.S. Fish and Wildlife Service, 2017b. Species Occurrence Data. Provided by USFWS.

**TABLE 3.3-2
 SPECIAL-STATUS WILDLIFE SPECIES**

Species	Federal/ State Status	Habitat Requirements	Potential to Occur
Tricolored blackbird (<i>Agelaius tricolor</i>)	ST	Freshwater marsh, swamp, wetland. Highly colonial species that requires open water, protected nesting substrate, and foraging area with insect prey within a few kilometers of the colony.	Low. Marginally suitable habitat may be present within the city within stands of tules and cattails; known populations of this species have been documented within the vicinity of Harbor Lake, a downstream portion of Wilmington Drain.
Least Bell's vireo (<i>Vireo bellii pusillus</i>)	FE/SE	Known to occur in riparian forest, scrub, and woodland habitats. Nests primarily in willow, baccharis, or mesquite habitats.	Low. Suitable habitat is marginally present within the city; known populations of this species have been documented within the vicinity in a downstream portion of Wilmington Drain.
Western mastiff bat (<i>Eumops perotis californicus</i>)	SSC	Many open, semi-arid to arid habitats, including conifer and deciduous woodlands, coastal scrub, grasslands, chaparral, etc. Can roost in crevices in cliff faces, high buildings, trees and tunnels.	Low. Suitable habitat is present within the city; known populations of this species have been documented within the vicinity in a downstream portion of Wilmington Drain.

NOTES: FE – Federally Endangered; SE – State Endangered; ST – State Threatened; SSC – State Species of Special Concern.

SOURCES: California Department of Fish and Wildlife, 2017. *California Natural Diversity Database (available by subscription) and Rarefind*. CDFW: Sacramento, California. Accessed December 1, 2017; California Native Plant Society (CNPS), 2017. Inventory of Rare and Endangered Plants of California. Available: <http://cnps.web.aplus.net/cgi-bin/inv/inventory.cgi>. Accessed December 4, 2017; U.S. Fish and Wildlife Service, 2017b. Species Occurrence Data. Provided by USFWS.

3.3.3 Regulatory Framework

This section provides the relevant federal, state, regional, and local regulations applicable to the Project.

Federal

The Federal Endangered Species Act of 1973 (USC, Title 16, Sections 1531 through 1543)

The FESA of 1973 and subsequent amendments provide guidance for the conservation of endangered and threatened species and the ecosystems upon which they depend. In addition, the FESA defines species as threatened or endangered and provides regulatory protection for listed species. The FESA also provides a program for the conservation and recovery of threatened and endangered species as well as the conservation of designated critical habitat that the USFWS determines is required for the survival and recovery of these listed species.

Federal Clean Water Act (33 USC 1251 through 1376) Sections 401 and 404 – Waters of the United States

The Clean Water Act (CWA) authorizes various state and federal agencies and tribes to implement programs in order to restore and maintain the chemical, physical, and biological integrity of the nation's waters. Section 404 of the CWA establishes a permit program administered by USACE that regulates the discharge of dredged or fill material into waters of the United States, including wetlands. Section 401 requires a landowner or other entity seeking to obtain a federal license or permit that allows activities resulting in a discharge to waters of the United States to also obtain a state water quality certification.

Migratory Bird Treaty Act (16 USC 703 through 711)

The Migratory Bird Treaty Act (MBTA) (16 U.S. Code [USC] Sections 703–711) includes provisions for the protection of migratory birds, including the non-permitted take of migratory birds, under the authority of the USFWS and CDFW. The MBTA makes it unlawful at any time, by any means or in any manner, to pursue, hunt, take, capture, kill migratory birds, and prohibits the removal of nests occupied by migratory birds. Over 800 species, including geese, ducks, shorebirds, raptors, songbirds, and many common species are protected under the MBTA.

In practice, federal permits potentially impacting migratory birds typically have conditions that require pre-disturbance surveys for nesting birds, and, in the event nesting is observed, a buffer area with a specified radius must be established within which no disturbance or intrusion is allowed until the young have fledged and left the nest, or it has been determined that the nest has failed. Activities that would require such a permit would include, but not be limited to, the destruction of migratory bird nesting habitat during the nesting season when eggs or young are likely to be present. If not otherwise specified in the permit, the size of the buffer area varies with species and local circumstances (e.g., presence of busy roads, intervening topography), and is based on the professional judgment of a qualified biologist.

State

California Endangered Species Act – California Fish and Game Code Section 2050 et seq.

The CESA establishes the policy of the state to conserve, protect, restore, and enhance threatened or endangered species and their habitats. For projects that would affect a listed species under both the CESA and the FESA, compliance with the FESA would satisfy the CESA if the CDFW determines that the federal incidental take authorization is “consistent” with the CESA under California Fish and Game Code Section 2080.1. For projects that would result in take of a species listed under the CESA only, the project operator would have to apply for a take permit under Section 2081(b).

California State Fish and Game Code Section 1602

Under this section of the California Fish and Game Code, the landowner or other entity is required to notify CDFW prior to undertaking any project that would divert, obstruct, or change the natural flow, bed, channel, or bank of any river, stream, or lake.

California Fully Protected Species

California fully protected species are described in Sections 3511, 4700, 5050, and 5515 of the California Fish and Game Code. These statutes prohibit take or possession of fully protected species. The CDFW is unable to authorize incidental take of fully protected species when activities are proposed in areas inhabited by those species.

California State Fish and Game Code Sections 2080 and 2081

Section 2080 of the California Fish and Game Code states that “No person shall import into this state [California], 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 [State Fish and Game Commission] determines to be an endangered species or threatened species, or attempt any of those acts, except as otherwise provided in this chapter, or the Native Plant Protection Act, or the California Desert Native Plants Act.”

California State Fish and Game Code Sections 3503, 3503.5, 3513, and 3800

Sections 3503, 3503.5, and 3800 of the CDFG Code prohibit the take or possession of birds, their nests, or eggs. Disturbance that causes nest abandonment and/or loss of reproductive effort (killing or abandonment of eggs or young) is considered a "take." Such a take would also violate federal law protecting migratory birds. Incidental Take Permits (i.e., Management Agreements) are required from the CDFW for projects that may result in the incidental take of species listed by California as endangered, threatened, or candidate species. The permits require that impacts to protected species be minimized to the extent possible and mitigated to a level of insignificance.

Clean Water Act, Section 401

Under Section 401 of the CWA, the local Regional Water Quality Control Board (RWQCB) (for this project, the Los Angeles RWQCB) must certify that actions receiving authorization under Section 404 of the CWA or other federal licenses and permits that may result in any discharge into waters of the United States also meet state water quality standards. The RWQCB requires projects to avoid impacts to wetlands if feasible and requires that projects do not result in a net

loss of wetland acreage or a net loss of wetland function and values. Compensatory mitigation for impacts to wetlands and/or waters of the state is typically required.

Porter-Cologne Water Quality Control Act

The RWQCB also has jurisdiction over waters deemed “isolated” or not subject to Section 404 jurisdiction under the *Solid Waste Agency of Northern Cook County v. USACE* decision.

Dredging, filling, or excavation of state waters constitutes a discharge of waste and prospective dischargers are required to obtain authorization through an Order of Waste Discharge or waiver thereof from the RWQCB and comply with other requirements of Porter-Cologne Act.

Local

Los Angeles County General Plan

The Los Angeles County (County) General Plan 2035 provides the policy framework for how and where the unincorporated portions of the county will grow through the year 2035. The current County General Plan was adopted in 2015. The County General Plan Conservation and Natural Resources Element (Chapter 9) guides the long-term conservation of natural resources and preservation of available open space areas. Section III of Chapter 9 describes the goals and policies for biological resources occurring within unincorporated county land. The main types of biological resources in the unincorporated areas are regional habitat linkages; forests; coastal zone; riparian habitats, streambeds and wetlands; woodlands; chaparral; desert shrubland; alpine habitats; Significant Ecological Areas (SEAs); and Coastal Resource Areas (CRAs). The General Plan works to protect and enhance these resources, and ensure that the legacy of the unique biotic diversity is passed on to future generations.

Los Angeles County Significant Ecological Areas

As part of the Conservation and Open Space and Land Use Elements of the General Plan, the County has identified and adopted policies since 1970 for the establishment of SEAs. These SEAs were developed to maintain biological diversity by establishing natural biological parameters (key species, habitat types, and linkages) and recommend management practices. The final boundaries and categories for the 21 SEAs (and 9 Coastal Resource Areas) were established in 2015 with the County Board of Supervisors approval of the General Plan 2035. The Planning Area does not include any mapped SEAs. The nearest mapped SEA is located approximately 1 mile to the south within the Harbor Lake Regional Park SEA.

Los Angeles County Oak Tree Protection Ordinance

Portions of the city’s SOI are located within unincorporated Los Angeles County. The Los Angeles County Oak Tree Ordinance was established to recognize oak trees as significant historical, aesthetic, and ecological resources. The goal of the ordinance is to create favorable conditions for the preservation and propagation of this unique and threatened plant heritage. By making this part of the development process, healthy oak trees will be preserved and maintained. The Los Angeles County Oak Tree Ordinance applies to all unincorporated areas of the County. Trees subject to County permit requirements include those defined by Title 22.56.2060 as: any tree of the oak genus (*Quercus*) which is (a) 25 inches or more in circumference (eight inches in diameter) as measured four and one-half feet above mean natural grade; or (b) in the case of an

oak with more than one trunk, whose combined circumference of any two trunks is at least 38 inches (12 inches in diameter) as measured four-and-one-half feet above mean natural grade.

Additionally, the Los Angeles County Oak Tree Ordinance defines the “Protected Zone” of a tree as, “that area within the dripline of an oak tree and extending therefrom to a point at least five feet outside the dripline, or 15 feet from the trunks of a tree, whichever distance is greater” (Title 22.56.2060). For the purposes of determining tree impacts, trees that have protected zones that have been encroached upon would also be considered impacted. Under the Los Angeles County Ordinance, a person must obtain a permit to cut, destroy, remove, relocate, inflict damage upon, or encroach into the protected zone of any tree of the oak tree genus that is 8 inches or more in diameter, 4.5 feet above mean natural grade, or in the case of oaks with multiple trunks, a combined diameter of 12 inches or more of the two largest trunks.

City of Carson Tree Preservation and Protection Ordinance

The City of Carson manages all aspects of parkway trees to preserve aesthetics and maintain the natural environment of the community. Article III, Public Safety, Chapter 9, City Tree Preservation and Protection, of the Carson Municipal Code outlines all the management practices of the City, best management practices (BMPs) for contractors, and penalties for violations of the Carson Municipal Code. No one is allowed to work on a parkway tree in the city without obtaining a permit first and must follow the guidelines discussed in the Carson Municipal Code. Any person, firm, partnership or corporation violating provisions of the Carson Municipal Code or failing to comply with its requirements may face a misdemeanor charge subject to a fine of \$1,000, or the diminishment of the tree’s value as set forth in the current edition of the Guide for Plant Appraisal, whichever is greater, and 6 months’ imprisonment. Each tree that is removed or trimmed on a parcel or property is considered a separate violation. Replacement of the trees in violation must be completed within 60 days of notice by the City. Violating any of the policies in the Carson Municipal Code during construction activities may result in an immediate stop-work order issued by the City. A City of Carson Public Works Division Application for Permit to Remove Street Trees is required prior to the removal of any trees that meet the definitions described in the Carson Municipal Code.

3.3.4 Project Impact Analysis

Thresholds of Significance and Methodology

Thresholds of Significance

Appendix G of the State CEQA Guidelines provides screening questions that address potential impacts related to a number of environmental issues. The CEQA guidelines provide that lead agencies may use the questions set forth in the Appendix G to assess the significance of a project’s environmental effects, and the use of Appendix G as a significance threshold is routinely sanctioned by the courts (although such use is not mandatory). Based on the Appendix G questions regarding biological resources, a project would have a significant impact if the project would:

Threshold BIO-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 CDFW or USFWS;

- Threshold BIO-2:** Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, or regulations or by the CDFW or USFWS;
- Threshold BIO-3:** Have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marsh, vernal pools, coastal saltmarsh, etc.) through direct removal, filling, hydrological interruption, or other means;
- Threshold BIO-4:** 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 BIO-5:** Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance; or
- Threshold BIO-6:** Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan.

Methodology

Insofar as the General Plan provides a general framework for future growth of the city, and does not contain specific development details, this analysis is programmatic in nature. As with any analysis of this type, subsequent projects carried out under the updated General Plan may warrant site-specific biological resource assessments and surveys once plans have been detailed and evaluated on a project-by-project basis.

This analysis summarized information gained largely from literature review. The study began with a literature review conducted to determine special-status natural communities and plant and animal species known to occur in the vicinity of the Planning Area. In accordance with industry accepted standards, database records were reviewed using CDFW's Natural Diversity Database application *RareFind* and the California Native Plant Society (CNPS) Electronic Inventory of Rare and Endangered Vascular Plants of California.

For each impact, organized by the significance criteria, the analysis applied the magnitude, uniqueness, and susceptibility estimates for each resource to determine the potential significant impact under CEQA. Mitigation measures were considered and applied, and then a final determination of significance reached. In conducting the analysis, three principal components of the CEQA Guidelines outlined above were considered:

- Magnitude of the impact (e.g., substantial/not substantial)
- Uniqueness of the affected resources (e.g., rarity of the resource); and
- Susceptibility of the affected resource to perturbation (e.g., sensitivity of the resource).

The evaluation of the significance of impacts considered the interrelationship of these three components.

Biological resources may either be directly or indirectly affected by a project. Impacts may occur as a result of construction of projects anticipated under the proposed General Plan update and as a result of operation after construction is complete. Furthermore, direct and indirect impacts may either be permanent or temporary. Permanent impacts result in an irreversible impact to or irreversible removal of biological resources, such as the elimination of a plant or animal community or habitat loss. Temporary impacts are those considered reversible, such that biological resources can be successfully restored.

The proposed General Plan update includes policies that protect and preserve biological resources within the city by designating specific resources and areas as protected, restricting activities and uses in protected areas, providing for the management of the resources on City lands, specifying impact avoidance and mitigation requirements for types of activities and by type of biological resource, and providing guidance for development and conservation decisions over the long-term. The policies anticipate the potential impacts on biological resources from the land uses and activities that are anticipated to occur under the proposed General Plan update and serve to avoid, reduce, and/or mitigate those impacts. The key policies regarding biological resources are in the Open Space and Land Use Elements.

Project Impact Analysis

Adversely Affect Candidate, Sensitive, or Special-Status Species

Threshold BIO-1: The Project would have a significant impact if future development allowed by Carson2040 would have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by the CDFW or USFWS.

Impact BIO-1: *The Project would not have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by the CDFW or USFWS. (Less than Significant)*

Construction

Special-Status Plants

As described above in Table 3.3-1, one special-status plant species (Southern Tarplant) has been recorded within the Planning Area, where future development allowed by the proposed General Plan update could directly or indirectly impact this biological resource. Adverse impacts on plants are generally associated with the degree of habitat loss including a habitat's physical character, quality, and diversity. As anticipated by the buildout of the proposed General Plan update, construction of some projects could result in direct removal of Southern Tarplant. This species has a high potential to occur within the Planning Area (particularly along both banks of the Dominguez Channel on either side of I-110, north of Interstate 405), and future projects would

have potential to impact Southern Tarplant on a project-by-project basis due to specific onsite conditions, which could result in a potentially significant impact.

However, construction of all future projects facilitated under the proposed General Plan update would be required to comply with the proposed General Plan policies listed below. Specifically, compliance with Guiding Policy OSEC-G-4 would require future projects under the proposed General Plan update to identify any special-status plants located within a future project's area of effect that are state or federally listed as Endangered, Threatened, or Rare, which would help to reduce significant impacts to special-status species within the Planning Area.

While implementation of the proposed General Plan policies would help to reduce impacts to special-status plants due to construction of future projects under the proposed General Plan update, all future projects would also be required to comply with all applicable laws, regulations, and ordinances related to special-status plants. All project sites that have been identified as supporting special-status plants would be required to comply with CESA and/or FESA through their regulatory permitting processes. The specific compensatory mitigation measures required to take a listed plant or to eliminate its habitat would be determined at the time of permitting prior to construction of the project. The compensatory mitigation measures would likely include habitat restoration and/or preservation, relocation of on-site special-status plants, and/or purchase of credits at a mitigation bank or in lieu fee program.

Although compliance with the proposed General Plan policies and applicable laws and regulations would help to minimize impacts to special-status plants, project-specific mitigation measures (MM BIO-1 through MM BIO-3) have also been incorporated to ensure that impacts to special-status plants would be reduced to a less than significant level on a project-by-project basis. The mitigation measures listed below would require future projects developed under the proposed General Plan update to implement procedures and processes related to protecting special-status plants, such as preconstruction surveys, transplantation, agency coordination and implementation of an environmental awareness program related to special-status plants. Implementation of the mitigation measures would ensure that the impact to special-status plants with construction of future projects under the proposed General Plan update would be less than significant.

Special-Status Wildlife

As described above in Table 3.3-2, three special-status wildlife species (Tricolored Blackbird, Least Bell's Vireo and the Western Mastiff Bat) have potential to occur within the Planning Area, where future development allowed by the proposed General Plan update could directly or indirectly impact these biological resources. Adverse impacts on wildlife are generally associated with the degree of habitat loss including a habitat's physical character, quality, and diversity, in addition to abundance of vegetation. As anticipated by the buildout of the proposed General Plan update, construction of some projects could result in direct removal of wildlife habitat, resulting in the potential mortality of wildlife species existing on-site as well as the displacement of more mobile species to suitable habitat areas nearby. While these biological resources have a low potential to occur within the Planning Area due to the heavily developed nature of the Planning

Area, future projects would have potential to impact these resources on a project-by-project basis due to specific onsite conditions, which could result in potentially significant impacts.

However, construction of all future projects facilitated under the proposed General Plan update would be required to comply with the proposed General Plan policies listed below. Specifically, compliance with Guiding Policy OSEC-G-4 would require future projects under the proposed General Plan update to monitor for wildlife migration routes and identify any special-status wildlife species located within a future project's area of effect that are state or federally listed as Endangered, Threatened, or Rare, which would help to reduce significant impacts to special-status species within the Planning Area.

While implementation of the proposed General Plan policies would help to reduce impacts to biological resources due to construction of future projects under the proposed General Plan update, all future projects would also be required to comply with all applicable laws, regulations, and ordinances related to special-status wildlife. All project sites that have been identified as supporting special-status wildlife would be required to comply with CESA and/or FESA through their regulatory permitting processes. The specific compensatory mitigation measures required to take a listed wildlife species or to eliminate its habitat would be determined at the time of permitting prior to construction of the project. The compensatory mitigation measures would likely include habitat restoration and/or preservation, purchase of mitigation bank or in lieu fee program credits, and/or limitations regarding the extent and timing of construction.

Although compliance with the proposed General Plan policies and applicable laws and regulations would help to minimize impacts to special-status wildlife, project-specific mitigation measures (MM BIO-4 through MM BIO-9) have also been incorporated to ensure that impacts to special-status wildlife would be reduced to a less than significant level on a project-by-project basis. The mitigation measures listed below would require future projects developed under the proposed General Plan update to implement procedures and processes related to protecting special-status wildlife, such as preconstruction surveys, compensatory mitigation ratios for loss of designated habitats, and protection and/or avoidance of special-status wildlife. Implementation of the mitigation measures would ensure that the impact to special-status wildlife with construction of future projects under the proposed General Plan update would be less than significant.

Nesting Birds

As described above, nesting birds and/or nesting bird habitat have been recorded within the Planning Area, where future development allowed by the proposed General Plan update could directly or indirectly impact these biological resources. The Planning Area consists of trees, shrubs, and ground cover that could be used by breeding raptors and songbirds. Disturbing or destroying active nests is a violation of the MBTA and nests and eggs are protected by Fish and Game Code, Section 3503. While these biological resources have a low potential to occur due to the heavily developed nature of the Planning Area, future projects would have potential to impact these resources on a project-by-project basis if removal of active nests or harassment of a breeding bird occur during construction, which could result in a potentially significant impact.

Construction of all future projects facilitated under the proposed General Plan update would be required to comply with the proposed General Plan policies listed below. Specifically, compliance with Guiding Policies OSEC-G-3 and OSEC-G-5 and Implementing Policies OSEC-P-5 and OSEC-P-7 would aim to enhance and expand the city's urban forest canopy, which in turn would increase available nesting bird habitat throughout the Planning Area. In addition to the proposed General Plan policies listed below, future applicants would also be required to comply with the MBTA, which would further reduce impacts to nesting birds.

Although compliance with proposed General Plan policies and the MBTA would help to minimize impacts to nesting birds and their associated habitat, project-specific mitigation measures (MM BIO-4 through MM BIO-6) have also been incorporated to ensure that impacts to nesting birds would be reduced to a less than significant level on a project-by-project basis. The mitigation measures listed below would require future projects developed under the proposed General Plan update to implement procedures and processes related to protecting nesting birds and their associated habitat, such as preconstruction surveys and protection and/or avoidance of nesting birds and their associated habitats. Implementation of the mitigation measures would ensure that the impact to nesting birds with construction of future projects under the proposed General Plan update would be less than significant.

Operations

Special-Status Plants

Operation of future projects facilitated under the proposed General Plan update could include routine landscaping and maintenance, which could have the potential to adversely impact special-status plants. Potential adverse impacts may result from introducing non-native or invasive plant species into areas that support special-status plant species and could result in invasive species outcompeting these natives for water, nutrients, and sunlight. However, future projects would be required to comply with the proposed General Plan policies, which support efforts to increase biodiversity of plant species by creating new natural habitats (Guiding Policy OSEC-G-3) or reclaiming natural habitats in heavily disturbed areas within the Planning Area (Implementing Policy OSEC-P-4). Furthermore, implementation of mitigation measure MM BIO-2 would require future applicants to prepare a special-plants planting plan, if applicable, to ensure that adequate conditions, species, and monitoring are implemented within restored and/or preserved areas throughout operation of the project. Through compliance with proposed General Plan policies and incorporation of this mitigation measure, the impact to special-status plants during operation would be reduced to a less than significant level.

Special-Status Wildlife

Operation of future projects developed under the proposed General Plan update could result in adverse impacts to special-status wildlife due to the removal and/or change in existing habitats, increased vehicular traffic and a corresponding increase in noise and threat of road kill by traffic; an increase in human presence in preserved or open space areas; an increase in predatory and feral pets; an increase in litter, pollutants, dust, oil, and other human debris; and an increase in nighttime light trespass onto preserved open space. All of the proposed General Plan policies listed below aim to help improve the conditions of the existing natural habitat and the associated

species that utilize those habitats. However, to ensure that the operational impact to special-status wildlife associated with future projects is reduced to a less than significant level, future project applicants would be required to incorporate and implement mitigation measures MM BIO-4 through MM BIO-9, as applicable.

Nesting Birds

Operation of future projects developed under the proposed General Plan update could result in adverse impacts to nesting birds due to the removal and/or change in existing habitats, increased vehicular traffic and a corresponding increase in noise and threat of road kill by traffic; an increase in human presence in preserved or open space areas; an increase in predatory and feral pets; an increase in litter, pollutants, dust, oil, and other human debris; and an increase in nighttime light trespass onto preserved open space. All of the proposed General Plan policies listed below aim to help improve the conditions of the existing natural habitat and the associated species that utilize those habitats. However, to ensure that the operational impact to nesting birds associated with future projects are reduced to a less than significant level, future project applicants would be required to incorporate and implement mitigation measures MM BIO-4 through MM BIO-6, as applicable.

Proposed General Plan Policies that Address the Impact

Open Space and Environmental Conservation Element

Guiding Policies

- OSEC-G-3 Support efforts to improve the biodiversity of plant and animal habitats within Carson by creating natural habitat areas when feasible. Support efforts to restore channelized creeks to naturalized flows, with supportive open space development that promotes healthy riparian habitat.
- OSEC-G-4 Recognize and support the preservation of wildlife migration routes and special status species that are state or federally listed as Endangered, Threatened, or Rare.
- OSEC-G-5 Promote ecology and avian habitat creation by supporting a strong urban forest.

Implementing Policies

- OSEC-P-4 Support reclamation of natural habitat in heavily disturbed locations, including closed landfills, channels, and when industrial areas are redeveloped, to improve the biodiversity of the city, increase resident's access to nature and outdoor recreation, restore plant and animal habitat, and assist with environmental remediation. This policy is intended to bring more greenery into the city and seeks to improve biological resources with reducing environmental impacts such as the heat island affect, improve air quality, assist with environmental remediation, and further environmental justice initiatives.
- OSEC-P-5 Recognize the importance of the urban forest to the natural environment in Carson and support the expansion of the tree canopy on public and private property throughout the community.
- OSEC-P-6 Enhance tree health and the appearance of streets and other public spaces through the regular maintenance as well as tree and landscaping planting and care of the existing canopy.

OSEC-P-7 Provide awareness among property owners, businesses, and developers of larger sites that may undergo redevelopment or sites located along creeks that may be naturalized about the possibilities for environmental improvement, such as landscape, maintenance and irrigation practices that foster habitat creation for wildlife species and improve the urban forest.

This would particularly apply to any properties adjacent to Dominguez Channel if that were to be naturalized, as called for in policy OSEC-P-19.

Mitigation Measures

MM BIO-1: Preconstruction Focused Survey for Special-Status Plants. Prior to initiating disturbance activities for individual projects that are subject to CEQA (California Environmental Quality Act) review (i.e., non-exempt projects), a focused survey for special-status plant species shall be performed by a qualified biologist(s) within the boundaries of the future project area, including all on-and off-site impact areas. If any special-status plants are found, a qualified biologist(s) with a California Department of Fish and Wildlife Scientific Collection Permit shall prepare a plan to relocate these species to suitable habitats within surrounding public open space areas that would remain undisturbed. For those species that cannot be physically transplanted, the biologist(s) shall collect seeds from the plants. To the extent feasible, the preconstruction focused survey shall be completed when species are in bloom, typically between May and November.

MM BIO-2: Special-Status Plants Planting Plan. Prior to initiating disturbance activities for individual projects that are subject to CEQA (California Environmental Quality Act) review (i.e., non-exempt projects) and that have the potential to cause direct or indirect impacts on special-status plants, a qualified biologist(s) shall prepare a Special-status Plant Planting Plan for the species to be transplanted. At a minimum, the plan shall include 1) a description of the existing conditions at the project site, including any on- or off-site impact areas, and receiver sites, 2) methods to transplant and/or collect seed for off-site planting and/or seeding, 3) a two-year monitoring program, including performance standards, 4) description of and/or figure showing plant spacing, and 5) long-term maintenance requirements, including a funding mechanism to support long-term maintenance activities. The City shall also require proof that the plan preparer consulted with U.S. Fish and Wildlife Service and/or California Department of Fish and Wildlife personnel or a qualified botanist in order to maximize transplanting success.

MM BIO-3: Listed Endangered and Threatened Plant Agency Coordination. For individual projects that are subject to CEQA (California Environmental Quality Act) review (i.e., non-exempt projects) and would impact state or federally listed plants, in addition to MM BIO-1 and -2, the City shall require the project applicant to provide documentation of the U.S. Fish and Wildlife Service (USFWS) or California Department of Fish and Wildlife (CDFW) authorizing take of listed plants or concurring the project would not be likely to result in an adverse effect on the species. The federal Endangered Species Act does not address listed plants on private property unless some type of federal action is involved. If a federal action is required for a project (e.g., federal funding, Clean Water Act compliance), a consultation between the lead federal agency and the USFWS must be completed. Under the California Endangered Species Act, Section 2081 subdivision (b) of the Fish and Game Code allows CDFW to authorize take of species listed as endangered, threatened, candidate, or a rare plant, if that take is incidental to otherwise lawful activities and if certain conditions are met.

MM BIO-4: Preconstruction Surveys for Special-Status Wildlife. For individual projects that are subject to CEQA (California Environmental Quality Act) review (i.e., non-exempt projects) and are found to contain suitable habitat for special-status wildlife species (including surrounding areas within 300 feet of the site), no earlier than three weeks prior to initiating disturbance activities, focused surveys for special-status wildlife species shall be completed by a qualified biologist(s) within the boundaries of the future project, including all on-and off-site impact areas. If any special-status wildlife species are found, a qualified biologist(s) with a California Department of Fish and Wildlife (CDFW) Scientific Collection Permit shall prepare a plan to relocate these species to suitable habitats within surrounding public open space areas that would remain undisturbed, unless the biologist determines that such relocation cannot reasonably be accomplished at which point CDFW will be consulted regarding whether relocation efforts should be modified or terminated. The relocation plan, including relocation methods (e.g., trap and release) and proposed receiver sites shall be approved by the CDFW prior to relocating any wildlife. If relocation is determined to not be a feasible option, the project applicant shall propose other form(s) of compensatory mitigation (e.g., off-site habitat restoration and/or preservation, payment into an existing restoration program, or providing funds to another City-approved conservation program).

MM BIO-5: Listed Endangered or Threatened Wildlife Habitat Assessment. Prior to approval of individual projects that are subject to CEQA (California Environmental Quality Act) review (i.e., non-exempt projects) and may impact potentially suitable habitat for federally or state listed endangered or threatened species, the City shall require a habitat assessment to be completed by a qualified biologist(s) well versed in the requirements of the species in question. If no suitable habitat for the listed species is identified within 300 feet of construction or maintenance activities, no further measures would be required in association with the project. If suitable habitat for the species is identified within 300 feet of such activities, prior to construction, the City shall require that a focused survey be completed by a qualified biologist(s) for the species in accordance with protocols established by the U.S. Fish and Wildlife Service and/or California Department of Fish and Wildlife.

In the event a state or federal listed species is determined to occupy habitat located in the proposed project site or within 300 feet of the site, the CDFW and/or USFWS shall be consulted, as required by the California Endangered Species Act and/or federal Endangered Species Act. In order to address and acknowledge the potential for listed species to occur within the Planning Area or be impacted by future development projects, this assessment acknowledges future actions by state and federal resource agencies in addition to the analyses necessary and required under CEQA.

MM BIO-6: Nesting Bird Surveys. All vegetation clearing for construction and fuel modification for individual projects that are subject to CEQA (California Environmental Quality Act) review (i.e., non-exempt projects) shall occur outside of the breeding bird season (February 1 and August 31), if feasible, to ensure that no active nests would be disturbed unless clearing and/or grading activities cannot be avoided during that time period. If clearing and/or grading activities for individual projects cannot be avoided during the breeding season, all suitable habitats shall be thoroughly surveyed for the presence of nesting birds by a qualified biologist(s) no earlier than three weeks prior to initiating disturbance activities. Suitable nesting habitat within the Planning Area include ornamental landscaping trees and shrubs, mixed-riparian woodland, and non-native

woodland communities. If any active nests are detected, the area shall be flagged along with a 300-foot buffer for song birds and a 500-foot buffer for raptorial birds (or otherwise appropriate buffer as determined by the surveying biologist), and shall be avoided until the nesting cycle is complete or it is determined by the surveying biologist that the nest is no longer active.

MM BIO-7: Use of Buffers Near Active Bat Roosts. During the November 1 to March 31 hibernation season, disturbance activities for individual projects that are subject to CEQA (California Environmental Quality Act) review (i.e., non-exempt projects) shall not be conducted within 100 feet of woodland habitat that provides suitable bat roosting habitat. Bat presence is difficult to detect using emergence surveys during this period due to decreased flight and foraging behavior. If a qualified biologist who is highly familiar with bat biology determines woodland areas do not provide suitable hibernating conditions (for example, cavities in the trunk or branches, woodpecker holes, loose bark, cracks, splits and thick ivy) and therefore, bats are unlikely to be present in the area, work may commence as planned.

MM BIO-8: Bat Maternity Roosting Surveys. Prior to approval of individual projects that are subject to CEQA (California Environmental Quality Act) review (i.e., non-exempt projects) and may impact potentially suitable habitat for bats, the City shall require a bat maternity roosting survey. No earlier than three weeks prior to initiating disturbance activities, a nighttime evening emergence survey and/or internal searches within large tree cavities shall be conducted by a qualified biologist who is highly familiar with bat biology during the maternity season (April 1 to August 31) to determine presence/absence of bat maternity roosts in wooded habitat in the project site or surrounding areas within 300 feet of the project site. All active roosts identified during the survey shall be protected by a buffer width to be determined by a qualified biologist. The buffer will be determined by the type of bat observed, topography, slope, aspect, surrounding vegetation, sensitivity of roost, type of potential disturbance, etc. Each buffer would remain in place until the end of the maternity roosting season. If no active roosts are identified, then work may commence as planned. Survey results are valid for 30 days from the survey date. Should work commence later than 30 days from the survey date, then additional surveys shall be conducted prior to starting the work.

MM BIO-9: Bat Roosting Replacement. All bat roosts that are permanently lost due to an individual project that is subject to CEQA (California Environmental Quality Act) review (i.e., non-exempt projects) must be documented via submission to the California Natural Diversity Data Base by the project's designated biologist and shall be replaced at a 1:1 ratio on- or off-site with a roost suitable for the displaced species (e.g., bat houses for colonial roosters). The design of such replacement habitat shall be coordinated with the California Department of Fish and Wildlife. Each new roost shall be in place prior to the time that the bats are expected to use the roosts as determined by a qualified biologist who is highly familiar with bat biology and shall be monitored annually for two to five years to ensure proper roosting habitat characteristics (e.g., suitable temperature and no leaks). The roost shall be modified as necessary to provide a suitable roosting environment for the target bat species.

Significance after Mitigation

The Project could result in a potentially significant impact with respect to special-status species and nesting birds during construction and operation of future projects facilitated under the

proposed General Plan update due to the potential to impact existing habitats and associated species on project sites. However, implementation of Mitigation Measures MM BIO-1 through MM BIO-9 stated above would reduce this impact to a less than significant level.

Adversely Affect Riparian Habitat or Sensitive Natural Habitat

Threshold BIO-2: The Project would have a significant impact if future development allowed by Carson2040 would have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, or regulations or by the CDFW or USFWS.

Impact BIO-2: *The Project would not have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, or regulations or by the CDFW or USFWS. (Less than Significant)*

As discussed above, riparian habitat has been documented in the Planning Area in the Dominguez Channel, Dominguez Branch Channel, Wilmington Drain, and in the Carson Harbor Village Mobile Home Park, which contains approximately 17 acres of wetlands protected by deed restrictions. These riparian areas within the Planning Area are not ideal locations to construct new development as they are either being used for regional infrastructure or are protected in perpetuity. USFWS designated critical habitat for listed plant or wildlife species does not occur within the Planning Area. In addition, sensitive natural communities have also been recorded within the Planning Area, which includes Southern Dune Scrub, Southern Foredunes, Southern Coastal Salt Marsh, and Southern Coastal Bluff Scrub. While these areas have not been identified as locations for new development, maintenance activities or improvements to these areas could result in impacts to these riparian habitats and/or sensitive natural communities.

A quantification of potential impacts on riparian or other sensitive natural communities cannot be made until the design and nature of specific projects is known. As a general rule, the removal and/or fragmentation of sensitive natural communities identified by the CDFW would be considered to be potentially significant due to their decline in the region and/or their suitability as habitat for sensitive species. In particular, the loss and/or fragmentation of riparian alliances and most native shrubland and scrub alliances could adversely affect rare, endangered, or threatened plant and wildlife species. Therefore, removal and/or fragmentation of these habitats would be considered a significant impact.

With buildout of the proposed General Plan update, development of some projects could result in direct removal or indirect impacts to the identified sensitive natural communities or riparian habitat depending on the location and scale of future projects. However, construction of all future projects facilitated under the proposed General Plan update would be required to comply with the proposed General Plan policies listed under Impact BIO-1. Specifically, compliance with Guiding Policy OSEC-G-4 would require future projects under the proposed General Plan update to recognize and support the preservation of wildlife migration routes and special-status species that are state or federally listed as Endangered, Threatened, or Rare, which would help to reduce significant impacts to sensitive natural communities or riparian habitats within the Planning Area. In addition, all future projects would also be required to comply with all applicable laws,

regulations, and ordinances related to sensitive natural communities and riparian habitat to ensure all obligatory protocols and/or measures are undertaken to protect these resources.

Although compliance with the proposed General Plan policies and the applicable laws and regulations would help to minimize impacts to sensitive natural communities, project-specific mitigation measures have also been incorporated to ensure that impacts to sensitive natural communities and riparian habitat would be reduced to a less than significant level on a project-by-project basis. Implementation of the mitigation measures listed below would ensure that the impact to sensitive natural communities and riparian habitat with development of future projects under the proposed General Plan update would be less than significant.

Proposed General Plan Policies that Address the Impact

Guiding Policies OSEC-G-3, OSEC-G-4, and OSEC-G-5, and Implementing Policies OSEC-P-4, OSEC-P-5, OSEC-P-6, and OSEC-P-7, as discussed under Impact BIO-1.

Mitigation Measures

MM BIO-10: Sensitive Natural Communities. To mitigate potential impacts on sensitive woodland, shrubland and scrub natural communities provided a California Department of Fish and Wildlife state sensitivity rank of S1 to S3, future projects that are subject to CEQA (California Environmental Quality Act) review (i.e., non-exempt projects) shall implement the following mitigation measures prior to any ground disturbance:

- If avoidance cannot be reasonably accomplished, impacts to any S1 to S3 categorized shrubland, scrub or woodland alliance shall be mitigated through on- or off-site restoration, enhancement and/or preservation. For off-site mitigation, the applicant shall acquire mitigation land of similar habitat at a ratio of at least 1:1. On-site mitigation shall also be completed at a ratio of at least 1:1. A habitat mitigation plan shall be prepared and submitted to the City for approval, prior to any ground disturbance.
- For projects that have the potential to result in direct or indirect impacts to sensitive natural communities, a habitat mitigation plan shall be prepared and approved in writing by the City prior to any ground disturbance. The plan shall include adaptive management practices to achieve the specified ratio for on- or off-site restoration (and/or preservation. At a minimum, the plan shall include a description of the existing conditions at the mitigation site(s), goals and timelines, installation methods, monitoring procedures, plant spacing, adaptive management strategies, and long-term maintenance requirements.

MM BIO-11: Jurisdictional Waters. To mitigate for impacts to waters of the U.S. and/or waters of the state, future projects that are subject to CEQA (California Environmental Quality Act) review (i.e., non-exempt projects) shall implement the following measures in consultation with the regulating agencies (U.S. Army Corps of Engineers [USACE], California Department of Fish and Wildlife [CDFW], and Regional Water Quality Control Board [RWQCB], as applicable):

- The applicant shall provide on- and/or off-site compensatory mitigation in order to offset permanent impacts to USACE, RWQCB, and CDFW jurisdictional waters and

wetlands at a ratio of no less than 1.5:1 and/or include the purchase of mitigation credits at an agency-approved mitigation bank or in-lieu fee program.

- If compensatory mitigation is required, a compensatory mitigation plan shall be prepared in accordance with applicable agency policies and implemented, once approved by relevant agencies and the City.

Significance after Mitigation

The Project could result in a potentially significant impact with respect to sensitive natural communities and riparian habitats during construction and operation of specific projects under the proposed General Plan update due to the removal and/or fragmentation of these resources within the Planning Area. However, implementation of Mitigation Measures MM BIO-10 and MM BIO-11 stated above in addition to MM BIO-1 through MM BIO-9, as applicable, would reduce this impact to a less than significant level.

Adversely Affect State or Federally Protected Wetlands

Threshold BIO-3: The Project would have a significant impact if future development allowed by Carson2040 would have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marsh, vernal pools, coastal saltmarsh, etc.) through direct removal, filling, hydrological interruption, or other means.

Impact BIO-3: *The Project would not have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marsh, vernal pools, coastal saltmarsh, etc.) through direct removal, filling, hydrological interruption, or other means. (No Impact)*

Within the Planning Area, wetlands have been identified within the Carson Harbor Village Mobile Home Park, which contains approximately 17 acres of wetlands protected by deed restrictions. Since these wetlands are protected by deed restrictions for perpetuity, no development or changes may occur within the wetlands boundaries. The only other wetland area documented within the Planning Area is the 17-acre Bixby Marshland, owned and operated by the Los Angeles County Sanitation Districts. Consequently, development under the proposed General Plan update would not have the potential to impact federally or state-protected wetlands through direct removal, filling, hydrologic interruption, or by other means. Therefore, no impact would occur related to adversely affecting federally or state-protected wetlands.

Proposed General Plan Policies that Address the Impact

There are no applicable proposed General Plan policies that relate to federally or state-protected wetlands.

Mitigation Measures

None required.

Interfere with Wildlife Corridors or Wildlife Nursery Sites

Threshold BIO-4: The Project would have a significant impact if future development allowed by Carson2040 would 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 BIO-4: *The Project would not 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. (Less than Significant)*

As discussed above in Environmental Setting, limited wildlife movement is expected within the Planning Area due to the prevalence of developed areas and lack of native habitats. However, particularly within the riparian woodland communities, these communities may support movement on a smaller or “local” scale for species of invertebrates, amphibians, reptiles, birds, and small-to-medium mammals, primarily those with high urban tolerance. The home range of many of these species may be entirely contained within the isolated patches of riparian woodland habitat remaining within the city. However, on a larger regional scale, movement is not expected except for some limited movement along the improved, channelized waterways that may attract avian species and urban-adapted wildlife following these aquatic resources to areas where patches of habitat may be present.

As stated under Impact BIO-2, a quantification of potential impacts on riparian or other sensitive natural communities cannot be made until the design and nature of specific projects is known. As a general rule, the removal and/or fragmentation of sensitive natural communities identified by the CDFW and listed in Table 3.3-1 would be considered to potentially significant due to their decline in the region and/or their suitability as habitat for sensitive species. With buildout of the proposed General Plan update, operation of some projects could result in indirect impacts to the identified riparian habitat depending on maintenance and improvement activities. However, operation and maintenance of all future projects facilitated under the proposed General Plan update would be required to comply with the proposed General Plan policies listed under Impact BIO-1. Specifically, compliance with Guiding Policy OSEC-G-4 would require future projects under the proposed General Plan update to monitor for wildlife migration routes and identify special-status species that are state or federally listed as Endangered, Threatened, or Rare, which would help to reduce significant impacts to riparian habitats within the Planning Area. In addition, all future projects would also be required to comply with all applicable laws, regulations, and ordinances related to sensitive natural communities and riparian habitat to ensure all obligatory protocols and/or measures are undertaken to protect these resources.

Although compliance with the proposed General Plan policies and the applicable laws and regulations would help to minimize impacts to riparian habitat, implementation of the proposed General Plan update could result in the potential removal and/or fragmentation of existing riparian habitat within the Planning Area, thus resulting in a potentially significant impact.

Proposed General Plan Policies that Address the Impact

Guiding Policy OSEC-G-4 as discussed under Impact BIO-1.

Mitigation Measures

Implement Mitigation Measures MM BIO-5, MM BIO-10 and MM BIO-11.

Significance after Mitigation

The Project could result in a potentially significant impact with respect to wildlife movement corridors during construction, operation and maintenance of future projects under the proposed General Plan update due to the potential removal and/or fragmentation of existing riparian habitat within the Planning Area. However, implementation of Mitigation Measures MM BIO-5, MM BIO-10 and MM BIO-11 would reduce this impact to a less than significant level.

Conflict with Tree Preservation Policy or Ordinance

Threshold BIO-5: The Project would have a significant impact if future development allowed by Carson2040 would conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance.

***Impact BIO-5:** The Project would not conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance. (No Impact)*

Implementation of the proposed General Plan update would not introduce any potential conflicts with the existing City of Carson Tree Preservation and Protection Ordinance or the Los Angeles County Oak Tree Protection Ordinance, which applies to the city's SOI. Development of future projects facilitated under the proposed General Plan update would be subject to the City and County's tree preservation ordinances, as applicable, which includes adherence to tree management and trimming procedures. In addition, proposed General Plan policies help promote a strong urban forest across public and private properties (Guiding Policy OSEC-G-5 and Implementing Policy OSEC-P-5) and enhance tree health and appearance of streets and other public spaces through the regular maintenance as well as tree and landscaping planting and care of the existing canopy (OSEC-P-6). Future project's consistency with these policies would further ensure impacts to existing and proposed tree resources would be minimized. Therefore, the impact associated with creating a conflict with a tree preservation policy or ordinance would not occur.

Proposed General Plan Policies that Address the Impact

Guiding Policy OSEC-G-5 and Implementing Policies OSEC-P-5 and OSEC-P-6 as discussed under Impact BIO-1.

Mitigation Measures

None required.

Conflict with Adopted Habitat Conservation Plan or Natural Community Conservation Plan

Threshold BIO-6: The Project would have a significant impact if future development allowed by Carson2040 would conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan.

***Impact BIO-6:** The Project would not conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan. (No Impact)*

Due to the lack of biological resources and heavily developed nature of the Planning Area, there are no Habitat Conservation Plans, Natural Community Conservation Plans, or other approved local, regional, or state habitat conservation plans adopted for the Planning Area. For this reason, development of future projects under the proposed General Plan update would not conflict or interfere with an adopted habitat conservation plan. As discussed above, while the presence of biological resources is relatively limited within the Planning Area, proposed General Plan policies aim to protect and enhance the few biological resources within the Planning Area, as listed under Impact BIO-1. Therefore, the impact related to creating a conflict with a habitat conservation plan would not occur.

Proposed General Plan Policies that Address the Impact

Guiding Policies OSEC-G-3, OSEC-G-4, and OSEC-G-5, and Implementing Policies OSEC-P-4, OSEC-P-5, OSEC-P-6, and OSEC-P-7, as discussed under Impact BIO-1.

Mitigation Measures

None required.

3.3.5 Cumulative Impact Analysis

The geographic context for the cumulative analysis for biological resources includes the neighboring cities and unincorporated County lands located within the South Bay region of southern Los Angeles County. Future development in the area, including growth anticipated under the proposed General Plan update, would contribute incrementally to the continuing reduction in relatively natural, undisturbed open space areas, contribute to the progressive fragmentation of habitat areas, and decline in species diversity throughout the region, thus resulting in a potentially significant cumulative impact to biological resources.

Since there are limited biological resources and habitats within the Planning Area, buildout of the proposed General Plan update would not significantly impact biological resources within its jurisdiction as the Planning Area is already heavily developed. Additionally, the proposed General Plan update includes policies that aim to protect and enhance the few biological resources within the Planning Area, which in combination with Mitigation Measures MM BIO-1 through MM BIO-11, would ensure that the impact to biological resources and habitats would be reduced to a less than significant level as future projects would be required to demonstrate

consistency with the measures. For these reasons, the Project's contribution to this potentially significant cumulative impact would not be cumulatively considerable.

3.4 Cultural Resources

3.4.1 Introduction

This section provides an analysis of potential environmental impacts on cultural resources from future development allowed under the Project, including those related to historic architectural resources, archaeological resources, and human remains. This section describes the historical setting of the Planning Area as well as the context for historic architectural resources and archaeological resources in the Planning Area. It also includes a description of the relevant federal, state, and local regulations and programs related to historic and cultural resources. Tribal cultural resources are evaluated in Section 3.16, *Tribal Cultural Resources*, of this Draft EIR.

No comments were received in response to the Notice of Preparation (NOP) and Recirculated NOP regarding cultural resources.

3.4.2 Environmental Setting

Prehistoric Setting

Based on recent research in the southern California region,¹ the following prehistoric chronology has been divided into four general time periods: the Paleocoastal Period (12,000 to 8,500 Before Present [B.P.]), the Millingstone Period (8,500 to 3,000 B.P.), the Intermediate Period (3,000 to 1,000 B.P.), and the Late Period (1,000 B.P. to Anno Domini [A.D.] 1542). This chronology is manifested in the archaeological record by particular artifacts and burial practices that indicate specific technologies, economic systems, trade networks, and other aspects of culture.

Paleocoastal Period (12,000–8,500 B.P.)

While it is not certain when humans first came to California, their presence in southern California by about 11,600 B.P. has been well documented. At Daisy Cave, on San Miguel Island, cultural remains have been radiocarbon dated to between 11,100 and 10,950 B.P. During this time period, the climate of southern California became warmer and more arid and the human population, residing mainly in coastal or inland desert areas, began exploiting a wider range of plant and animal resources.² In the vicinity of the Planning Area, evidence of Paleocoastal occupation is sparse, and none has been confirmed by scientific dating methods (such as radiocarbon dating).³

Millingstone Period (8,500–3,000 B.P.)

During this time period, there is evidence for the processing of acorns for food and a shift toward a more generalized economy. The first evidence of human occupation in the Los Angeles area

¹ Douglass, John G., Seetha N. Reddy, Richard Ciolek-Torello, and Donn R. Grenda, 2016, editors, *People in a Changing Land: The Archaeology and History of the Ballona in Los Angeles, California*, Statistical Research, Inc., Technical Series 94, Tucson, Arizona and Redlands, California.

² Byrd, Brian F., and Mark L. Raab, 2007, Prehistory of the Southern Bight: Models for a New Millennium. In *California Prehistory: Colonization, Culture, and Complexity*, edited by Terry L. Jones and Kathryn A. Klar, pages 215-227.

³ Douglass, John G., Seetha N. Reddy, Richard Ciolek-Torello, and Donn R. Grenda, 2016, editors, *People in a Changing Land: The Archaeology and History of the Ballona in Los Angeles, California*, Statistical Research, Inc., Technical Series 94, Tucson, Arizona and Redlands, California.

dates to at least 9,000 years B.P. and is associated with the Millingstone cultures.^{4,5} Millingstone cultures were characterized by the collection and processing of plant foods, particularly acorns, and the hunting of a wider variety of game animals.^{6,7} Millingstone cultures also established more permanent settlements that were located primarily on the coast and in the vicinity of estuaries, lagoons, lakes, streams, and marshes where a variety of resources, including seeds, fish, shellfish, small mammals, and birds, were exploited. Early Millingstone occupations are typically identified by the presence of handstones (manos) and millingstones (metates), while those Millingstone occupations dating later than 5,000 B.P. contain a mortar and pestle complex as well, signifying the exploitation of acorns in the region. Cogged stones (cog-shaped stones) and discoidal (stone discs) are also indicative of the Millingstone Period.

In the vicinity of the Planning Area, sites that date to this time period appear to have been small settlements or campsites reflecting resource gathering groups exploiting nearby lagoon or marshland (inland swamp) resources and specialized resource processing (such as shellfish). There is a gap in the archaeological record between 6,000 and 5,000 B.P., which suggests that the vicinity of the Planning Area was sparsely occupied or abandoned during this time frame.⁸

Intermediate Period (3,000–1,000 B.P.)

During this time period, many aspects of Millingstone culture persisted, but a number of socioeconomic changes occurred.^{9,10,11} The native populations of southern California were becoming less mobile and populations began to gather in small sedentary villages with satellite resource-gathering camps. Increasing population size necessitated the intensified use of existing terrestrial and marine resources.¹² Evidence indicates that the overexploitation of larger, high-ranked food resources may have led to a shift in subsistence, towards a focus on acquiring greater amounts of smaller resources, such as shellfish and small-seeded plants.¹³ This period is characterized by increased labor specialization, expanded trading networks for both utilitarian

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- 4 Wallace, William J., 1955, A Suggested Chronology for Southern California Coastal Archaeology. *Southwestern Journal of Anthropology* 11:214-230.
 - 5 Warren, Claude N., 1968, Cultural Tradition and Ecological Adaptation on the Southern California Coast. In *Archaic Prehistory in the Western United States*, C. Irwin-Williams, ed, pages 1-4. *Eastern New Mexico University Contributions in Anthropology*. Portales.
 - 6 Byrd, Brian F., and Mark L. Raab, 2007, Prehistory of the Southern Bight: Models for a New Millennium. In *California Prehistory: Colonization, Culture, and Complexity*, edited by Terry L. Jones and Kathryn A. Klar, pages 215-227.
 - 7 Wallace, William J., 1955, A Suggested Chronology for Southern California Coastal Archaeology. *Southwestern Journal of Anthropology* 11:214-230.
 - 8 Douglass, John G., Seetha N. Reddy, Richard Ciolek-Torello, and Donn R. Grenda, 2016, editors, *People in a Changing Land: The Archaeology and History of the Ballona in Los Angeles, California*, Statistical Research, Inc., Technical Series 94, Tucson, Arizona and Redlands, California.
 - 9 Erlandson, Jon M., 1994, *Early Hunter-Gatherers of the California Coast*, Plenum Press, New York.
 - 10 Wallace, William J., 1955, A Suggested Chronology for Southern California Coastal Archaeology. *Southwestern Journal of Anthropology* 11:214-230.
 - 11 Warren, Claude N., 1968, Cultural Tradition and Ecological Adaptation on the Southern California Coast. In *Archaic Prehistory in the Western United States*, C. Irwin-Williams, ed, pages 1-4. *Eastern New Mexico University Contributions in Anthropology*. Portales.
 - 12 Erlandson, Jon M., 1994, *Early Hunter-Gatherers of the California Coast*, Plenum Press, New York.
 - 13 Byrd, Brian F., and Mark L. Raab, 2007, Prehistory of the Southern Bight: Models for a New Millennium. In *California Prehistory: Colonization, Culture, and Complexity*, edited by Terry L. Jones and Kathryn A. Klar, pages 215-227.

and non-utilitarian materials, and extensive travel routes. Trade increased dramatically during this period, with asphaltum (tar), seashells, and steatite being traded from southern California to the Great Basin. Use of the bow and arrow spread to the coast around 1,500 B.P., largely replacing the dart and atlatl.¹⁴ Increasing population densities, with ensuing territoriality and resource intensification, may have given rise to increased disease and violence between 3,300 and 1,650 B.P.¹⁵

The Intermediate Period is characterized by a lack of manos, metates, and core tools, an increase in the use of mortars and pestles, and the introduction of stone-lined earthen ovens. There is a wider variety and increased numbers of projectile points, and flexed burials are common.¹⁶

In the vicinity of the Planning Area, the population density increased, possibly as a result of the migration of eastern desert Tadic peoples into the Los Angeles Basin, which is postulated to have begun by the end of the late Millingstone period and to have continued into the late Intermediate period. The Tadic incursion resulted in the introduction of new material culture and mortuary practices, and an increase in genetic variation, population, number of sites, and focus on terrestrial resources. Changes in climate may also have contributed to the increased occupation of the area, as a wetter environment led to increased biological diversity.

Late Period (1,000 B.P.–A.D. 1542)

The Late Period is associated with the florescence of the Gabrielino, who are estimated to have had a population numbering around 5,000 in the pre-contact period. The Gabrielino occupied what is presently Los Angeles County and northern Orange County, along with the southern Channel Islands, including Santa Catalina, San Nicholas, and San Clemente.¹⁷ This period saw the development of elaborate trade networks and use of shell-bead currency. Fishing became an increasingly significant part of subsistence strategies at this time, and investment in fishing technologies, including the plank canoe, are reflected in the archaeological record.^{18,19} Settlement at this time is believed to have consisted of dispersed family groups that revolved around a

¹⁴ Homburg, Jeffrey A., Douglass, John G., and Seetha N. Reddy, editors, 2014, *People in a Changing Land: The Archaeology and History of the Ballona in Los Angeles, California*, Volume 1. Statistical Research, Inc., Technical Series 94, Tucson, Arizona and Redlands, California.

¹⁵ Raab, L. Mark, Judith F. Porcasi, Katherine Bradford, and Andrew Yatsko, 1995, Debating Cultural Evolution: Regional Implications of Fishing Intensification at Eel Point, San Clemente Island. *Pacific Coast Archaeological Society Quarterly* 31(3):3–27.

¹⁶ Douglass, John G., Seetha N. Reddy, Richard Ciolek-Torello, and Donn R. Grenda, 2016, editors, *People in a Changing Land: The Archaeology and History of the Ballona in Los Angeles, California*, Statistical Research, Inc., Technical Series 94, Tucson, Arizona and Redlands, California.

¹⁷ Kroeber, A. L., 1925, *Handbook of the Indians of California*. Bureau of American Ethnology, Bulletin 78. Smithsonian Institution, Washington, D.C.

¹⁸ Erlandson, Jon M., 1994, *Early Hunter-Gatherers of the California Coast*, Plenum Press, New York.

¹⁹ Raab, L. Mark, Judith F. Porcasi, Katherine Bradford, and Andrew Yatsko, 1995, Debating Cultural Evolution: Regional Implications of Fishing Intensification at Eel Point, San Clemente Island. *Pacific Coast Archaeological Society Quarterly* 31(3):3–27.

relatively limited number of permanent village settlements that were located centrally with respect to a variety of resources.²⁰

In contrast to other parts of southern California, occupation of sites in the vicinity of the Planning Area appears to decrease during the early Late period, probably due to changing climate that resulted in an overall decline in precipitation, and episodic drought and flooding (the onset of the Late Period coincided with the medieval climatic anomaly [or MCA], a period of extended drought that occurred between A.D. 800 and 1350).²¹

Ethnographic Setting

The Planning Area is located within Gabrielino (Gabrieleño, *Tongva*, or *Kizh*) territory. According to Bean and Smith (1978:538), the Gabrielino, with the exception of the Chumash to the north, “were the wealthiest, most populous, and most powerful ethnic nationality in aboriginal Southern California.” Named after the San Gabriel Mission, the Gabrielino occupied sections of Los Angeles, Orange, and San Bernardino counties, and the islands of San Nicolas, Santa Catalina, and San Clemente. The Gabrielino subsisted on a variety of resources in several ecological zones. Acorns, sage, and yucca were gathered throughout the inland areas whereas shellfish, fish, as well as a variety of plants and animals were exploited within the marshes and along the coast. Deer and various kinds of small mammals were hunted on an opportunistic basis. Their material culture reflected the subsistence technology. Lithic tools such as arrow points and modified flakes were used to hunt and process animals. A variety of ground stone grinding implements, such as the mortar, pestle, mano, and metate, were used to process both plant and animal remains for food.²²

The settlement patterns of the Gabrielino, and other nearby groups such as the Juaneño and Luiseño, were similar and they often interacted through marriage, trade and warfare. The seasonal availability of water and floral and faunal resources dictated seasonal migration rounds with more permanent villages and base camps being occupied primarily during winter and spring months. In the summer months, the village populations divided into smaller units that occupied seasonal food procurement areas. The more permanent settlements tended to be near major waterways and food sources and various secular and sacred activities, such as food production and storage and tool manufacturing, were conducted at these areas.²³

²⁰ Koerper, H.C., R.D. Mason, and M.L. Peterson, 2002, Complexity, Demography, and Change in Late Holocene Orange County. In *Catalysts to Complexity: Late Holocene Societies of the California Coast*, edited by J.M. Erlandson and T.L. Jones, pages 63-81. Perspectives in California Archaeology Volume 6. University of California, Los Angeles.

²¹ Douglass, John G., Seetha N. Reddy, Richard Ciolek-Torello, and Donn R. Grenda, 2016, editors, *People in a Changing Land: The Archaeology and History of the Ballona in Los Angeles, California*, Statistical Research, Inc., Technical Series 94, Tucson, Arizona and Redlands, California.

²² Bean, L. J., and C. R. Smith, 1978, Gabrielino. In: *Handbook of North American Indians*, Vol. 8, California. Robert F. Heizer, ed., pp. 538-549. Smithsonian Institution, Washington.

²³ Bean, L. J., and C. R. Smith, 1978, Gabrielino. In: *Handbook of North American Indians*, Vol. 8, California. Robert F. Heizer, ed., pp. 538-549. Smithsonian Institution, Washington.

Suangna Village

The village of *Suangna* is known to be located within the Planning Area's limits, and historians have postulated that the village of *Suangna* was located in the south central portion of the city. The village was originally part of the Rancho San Pedro land grant given to Juan Dominguez.²⁴ The village has been described as containing shell midden, burials, and artifacts such as tubular stone pipes, abrading stones, pottery, manos, metates, mortars, pestles, steatite bowls, etc.²⁵ In 1971, Carson Councilman, Gilbert D. Smith formed the Carson Indian Historical Advisory Committee. The Committee, along with students and researchers from California State University, Dominguez Hills, completed an application to designate the village as a Point of Historical Interest. In 1972, a ceremony was held by the City of Carson and Watson Industrial Properties, to commemorate the village as a Point of Historical Interest. The artifacts recovered from the village are curated at California State University, Dominguez Hills.²⁶

The Arco Burial Site (CA-LAN-2682)

The Arco burial site, designated as CA-LAN-2682, is also located within the limits of the Planning Area. It is estimated that approximately 50 individuals of both genders were exposed and recovered during mechanical trenching of an oil refinery. Two separate burial episodes are believed to have occurred. The lower grouping of burials consists of individuals that were carefully laid out, some of which still held burial items. The upper grouping consisted of individuals which appeared to have been buried "hastily in random positions and directions".²⁷ Among the 500 plus artifacts recovered include shell beads, projectile points, bone awls, glass trade beads, steatite pipe fragments, and other steatite objects.²⁸

Historic Setting

Early History of the City of Carson

The city of Carson was once part of Rancho San Pedro, one of the first land grants awarded to Juan Jose Dominguez²⁹. It included more than 75,000 acres and stretched from the Los Angeles River, all the way west to the Pacific Ocean and encompassed the present-day cities of Carson, Torrance, Redondo Beach, Lomita, Wilmington, and portions of San Pedro. Dominguez was a soldier who first served under Pedro Fages and later escorted Junipero Serra and his Franciscan

²⁴ South Bay History, 2015. The Suangna Native American Village in Carson. Article accessed online at <http://blogs.dailybreeze.com/history/2015/01/17/the-suangna-native-american-village-in-carson>.

²⁵ Sander, Jay K., 2000. Department of Parks and Recreation Site Form for P-19-000098/CA-LAN-98. On file at the South Central Coastal Information Center.

²⁶ South Bay History, 2015. The Suangna Native American Village in Carson. Article accessed online at <http://blogs.dailybreeze.com/history/2015/01/17/the-suangna-native-american-village-in-carson>.

²⁷ Bonner, Wayne H., n.d. Human Burials. Article acquired online on September 8, 2017, at <https://scahome.org/publications/proceedings/Proceedings.13BonnerW1.pdf>.

²⁸ Department of Parks and Recreation Site Form for P-19-002682/CA-LAN-2682. On file at the South Central Coastal Information Center.

²⁹ Beck, Warren A., and Ynez D. Haase., 1974. Historical Atlas of California. University of Oklahoma Press, Norman, Publishing Division of the University. First edition.

padres while they established missions. Upon Dominguez' death, the Rancho was divided between his nephew (Jose Cristobal Dominguez) and a ranch helper.³⁰

By 1859, Manuel Dominguez (son of Jose Cristobal Dominguez) obtained the first Patent of Title from the United States government and was confirmed as the owner of the Rancho, which now included 43,119.13 acres (the present-day cities of Carson, Torrance, Redondo Beach, and the L.A. Harbor). Maria Victoria (daughter of Manuel Dominguez) married the successful businessman, George Henry Carson. Maria and George had a son, John Manuel Carson. The city was named after John Manuel Carson, who was head of the Dominguez Water Corporation and an important figure in the development of the area.³¹

Beginning with Juan Jose Dominguez and his descendants, ranching became a tradition in the Carson area that lasted for more than a hundred years. By the end of the 19th century, Dominguez' heirs began leasing and selling some of the Rancho land to small farmers³². By 1923, the city started growing with the arrival of Southern California Edison and the Southern California Gas Company. By 1926, the city had a general store, a lumber yard, a church, a bar, and a café. During World War II (WWII), the city was either developed, under cultivation or under petroleum production and processing. The city changed after WWII and agricultural pursuits were replaced by industrial, residential, and commercial businesses. By 1967, the Dominguez Estate Company announced over \$58, 500,000 of real estate property for sale in the city. The majority of real estate property ended up being purchased by the Union Pacific Railroad, Northwestern Mutual Life Insurance, Watson Land Company, Carson Estate Company, the State of California (for the formation of California State University, Dominguez Hills), and an unknown buyer. In 1968, the Carson area was incorporated as part of the city.³³

3.4.3 Regulatory Framework

This section provides the relevant federal, state, and local regulations applicable to the Project.

Federal

National Historic Preservation Act

The principal federal law addressing historic properties is the National Historic Preservation Act (NHPA), as amended (54 United States Code of Laws [USC] 300101 et seq.), and its implementing regulations (36 CFR Part 800). Section 106 requires a federal agency with jurisdiction over a proposed federal action (referred to as an “undertaking” under the NHPA) to take into account the effects of the undertaking on historic properties, and to provide the Advisory

³⁰ City of Carson, 2006–2016. Our City's Spanish Rancho Heritage. Acquired online on November 2, 2017, at <http://ci.carson.ca.us/AboutCarson/SpanishRancho.aspx>.

³¹ William Self Associates, Inc, 2001. (LA-05971) California Energy Commission Application for Certification BP 5th Train Project, City of Carson, Los Angeles County, California. Report on file at the South Central Coastal Information Center.

³² County of Los Angeles Public Library, 2017. History of Carson. Acquired online on November 2, 2017, at <https://colapublib.org/history/carson/faq.html>.

³³ URS, 2008. Watson Cogeneration Steam and Electric Reliability Project. Section 5.7 Cultural Resources. Acquired online on November 2, 2017, at http://www.energy.ca.gov/sitingcases/watson/documents/applicant/afc/Section%205.07_Cultural%20Resources.pdf.

Council on Historic Preservation (ACHP) an opportunity to comment on the undertaking. The term “historic properties” refers to “any prehistoric or historic district, site, building, structure, or object included in, or eligible for inclusion in, the National Register” (36 CFR Part 800.16(l)(1)). The implementing regulations (36 CFR Part 800) describe the process for identifying and evaluating historic properties, for assessing the potential adverse effects of federal undertakings on historic properties, and seeking to develop measures to avoid, minimize, or mitigate adverse effects. The Section 106 process does not require the preservation of historic properties; instead, it is a procedural requirement mandating that federal agencies take into account effects to historic properties from an undertaking prior to approval.

The steps of the Section 106 process are accomplished through consultation with the State Historic Preservation Officer (SHPO), federally recognized Indian tribes, local governments, and other interested parties. The goal of consultation is to identify potentially affected historic properties, assess effects to such properties, and seek ways to avoid, minimize, or mitigate any adverse effects on such properties. The agency also must provide an opportunity for public involvement (36 CFR 800.1(a)). Consultation with Indian tribes regarding issues related to Section 106 and other authorities (such as NEPA and Executive Order No. 13007) must recognize the government-to-government relationship between the federal government and Indian tribes, as set forth in Executive Order 13175, 65 FR 87249 (Nov. 9, 2000), and Presidential Memorandum of Nov. 5, 2009.

Section 106 (36 CFR 800.13(b)) also provides a process for the lead federal agency to review unanticipated discoveries, if historic properties are unexpectedly encountered after the Section 106 process has been completed and no agreement document is in place. If discovered, the lead federal agency shall make reasonable efforts to avoid, minimize, or mitigate adverse effects to such properties.

National Register of Historic Places

The National Register of Historic Places (National Register) was established by the NHPA of 1966, as “an authoritative guide to be used by federal, state, and local governments, private groups and citizens to identify the Nation’s cultural resources and to indicate what properties should be considered for protection from destruction or impairment.”³⁴ The National Register recognizes properties that are significant at the national, state, and/or local levels.

To be eligible for listing in the National Register, a resource must possess significance in American history, architecture, archaeology, engineering, or culture. Four Criteria for Evaluation have been established to determine the significance present in districts, sites, buildings, structures, and objects:

- A. That are associated with events that have made a significant contribution to the broad patterns of our history; or
- B. That are associated with the lives of persons significant in our past; or

³⁴ 36 Code of Federal Regulations (CFR) Section 60.2.

- C. That embody the distinctive characteristics of a type, period, or method of construction or that represent the work of a master, or that possess high artistic values, or that represent a significant and distinguishable entity whose components may lack individual distinction; or
- D. That has yielded, or may be likely to yield, information important in prehistory or history.³⁵

In addition to meeting one or more of the criteria of significance, a property must have integrity. Integrity is defined as “the ability of a property to convey its significance.” The National Register recognizes seven qualities that, in various combinations, define integrity. The seven factors that define integrity are location, 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.

Ordinarily 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 seven criteria considerations, in addition to meeting at least one of the four significance criteria and possessing integrity.

State

California Environmental Quality Act

CEQA is the principal statute governing environmental review of projects occurring in the state and is codified at Public Resources Code (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 an historical resource is a project that may have a significant effect on the environment.

The CEQA Guidelines (Title 14 California Code of Regulations [CCR] Section 15064.5) recognize that historical resources include: (1) a resource listed in, or determined to be eligible by the State Historical Resources Commission, for listing in the California Register of Historical Resources (California Register); (2) a resource 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 object, building, structure, site, area, place, record, or manuscript 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. The fact that a resource does not meet the three criteria outlined above does not preclude the lead agency from determining that the resource may be an historical resource as defined in PRC Sections 5020.1(j) or 5024.1.

³⁵ U.S. Department of Interior, National Park Service, 1995. Bulletin 15: How to Apply the National Register Criteria for Evaluation, Revised for Internet 1995, page 2.

This publication explains how the National Park Service applies these criteria in evaluating the wide range of properties that may be significant in local, state, and national history.

If a lead agency determines that an archaeological site is a historical resource, the provisions of CEQA Section and CEQA Guidelines Section 21084.1 and 15064.5, respectively, 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 Section 21083, which is as a unique archaeological resource. As defined in CEQA 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 Section 21083.2, then the site is to be treated in accordance with the provisions of 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 (Section 21083.1(a)). If preservation in place is not feasible, mitigation measures shall be required. CEQA Guidelines Section 15064.5(c)(4) notes 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.

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). As defined in CEQA Guidelines Section 15064.5(b)(1)), substantial adverse change is “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.” 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 Section 5020.1(k) of the Public Resources Code or its identification in a historical resources survey meeting the requirements of Section 5024.1(g) of the Public Resources 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, pursuant to CEQA Guidelines Section 15064.5(b)(3), 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 (Standards)³⁶ is considered to have mitigated its impacts to historical resources to a less-than-significant level.

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” (PRC Section 5024.1[a]). The criteria for eligibility for the California Register are based upon National Register criteria (PRC Section 5024.1[b]). Certain resources are determined by the statute 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,
- Those California Points of Historical Interest that have been evaluated by the OHP and have been recommended to the State Historical Commission for inclusion on the California Register.

³⁶ Grimmer, E. Anne, 2017. *The Secretary of the Interior’s Standards for the Treatment of Historic Properties with Guidelines for Preserving, Rehabilitating, Restoring & Reconstructing Historic Buildings*. Washington, D.C.: U.S. Department of the Interior National Park Services: Technical Preservation Services.

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;
- Historical resources contributing to 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 Government Code Sections 6254(r) and 6254.10

These sections of the California Public Records Act were enacted to protect archaeological sites from unauthorized excavation, looting, or vandalism. Section 6254(r) explicitly authorizes public agencies to withhold information from the public relating to “Native American graves, cemeteries, and sacred places maintained by the Native American Heritage Commission.” Section 6254.10 specifically exempts from disclosure requests for “records that relate to archaeological site information and reports, maintained by, or in the possession of the Department of Parks and Recreation, the State Historical Resources Commission, the State Lands Commission, the Native American Heritage Commission, another state agency, or a local agency, including the records that the agency obtains through a consultation process between a Native American tribe and a state or local agency.”

California Health and Safety Code Section 7050.5

California Health and Safety Code Section 7050.5 requires that in the event human remains are discovered, the County Coroner be contacted to determine the nature of the remains. In the event the remains are determined to be Native American in origin, the Coroner is required to contact the NAHC within 24 hours to relinquish jurisdiction.

California Public Resources Code Section 5097.98

California Public Resources Code Section 5097.98 provides procedures in the event human remains of Native American origin are discovered during project implementation. Public Resources Code 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. Public Resources Code 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. The MLD has 48 hours from the time of being granted access to the site by the landowner to inspect the discovery and provide recommendations to the landowner for the treatment of the human remains and any associated grave goods.

Local

Los Angeles County Historic Preservation Ordinance

The Los Angeles County Board of Supervisors adopted the County’s Historic Preservation Ordinance (HPO) on September 1, 2015. The HPO establishes criteria for designating landmarks and historic districts and provides protective measures for designated and eligible historic resources. The HPO applies to all privately owned property within the unincorporated territory of the County and all publicly owned landmarks, except properties that were not listed prior to the issuance of a demolition permit or properties affiliated with religious organizations. The HPO defines a landmark as “any property, including any structure, site, place, object, tree, landscape, or natural feature, that is designated as a landmark by the Board of Supervisors.” The HPO defines a historic district as, “A contiguous or noncontiguous geographic area containing one or more contributing properties which has been designated as an historic district by the Board of Supervisors.” Landmarks and historic districts may be designated if it is 50 years of age and meets one of the following criteria:

1. It is associated with events that have made a significant contribution to the broad patterns of the history of the nation, state, county, or community in which it is located;
2. It is associated with the lives of persons who are significant in the history of the nation, state, county, or community in which it is located;
3. It embodies the distinctive characteristics of a type, architectural style, period, or method of construction, or represents the work of an architect, designer, engineer, or builder whose work is of significance to the nation, state, county, or community in which it is located; or possesses artistic values of significance to the nation, State, County, or community in which it is located;
4. It has yielded, or may be likely to yield, significant and important information regarding the prehistory or history of the nation, state, county, or community in which it is located;
5. It is listed, or has been formally determined eligible by the United States National Park Service for listing, in the National Register of Historic Places, or is listed, or has been formally determined eligible by the State Historical Resources Commission for listing, on the California Register of Historical Resources;
6. If it is a tree, it is one of the largest or oldest trees of the species located in the County; or
7. If it is a tree, landscape, or other natural land feature, it has historical significance due to an association with an historic event, person, site, street, or structure, or because it is a defining or significant outstanding feature of a neighborhood.

Historic Districts

Property less than 50 years of age may be designated as a landmark if it meets one or more of the criteria and exhibits exceptional importance.

A geographic area, including a noncontiguous grouping of related properties, may be designated as an historic district if all of the following requirements are met:

1. More than 50 percent of owners in the proposed district consent to the designation;
2. The proposed district satisfies one or more of criteria 1 through 5; and

3. The proposed district exhibits either a concentration of historic, scenic, or sites containing common character-defining features, which contribute to each other and are unified aesthetically by plan, physical development, or architectural quality; or significant geographical patterns, associated with different eras of settlement and growth, particular transportation modes, or distinctive examples of parks or community planning.

County of Los Angeles General Plan

The Conservation and Natural Resources Element of the County’s General Plan (applicable to unincorporated lands in the Planning Area) indicates that “Historic, cultural, and paleontological resources are an important part of Los Angeles County’s identity”. This element provides the following goal and policies for the treatment of cultural resources:

Goal C/NR 14: Protected historic, cultural, and paleontological resources.

Policy C/NR 14.1: Mitigate all impacts from new development on or adjacent to historic, cultural, and paleontological resources to the greatest extent feasible.

Policy C/NR 14.2: Support an inter-jurisdictional collaborative system that protects and enhances historic, cultural, and paleontological resources.

Policy C/NR 14.3: Support the preservation and rehabilitation of historic buildings.

Policy C/NR 14.5: Promote public awareness of historic, cultural, and paleontological resources.

Policy C/NR 14.6: Ensure proper notification and recovery processes are carried out for development on or near historic, cultural, and paleontological resources.

3.4.4 Project Impact Analysis

Thresholds of Significance and Methodology

Thresholds of Significance

Appendix G of the State CEQA Guidelines provides screening questions that address potential impacts related to a number of environmental issues. The CEQA guidelines provides that lead agencies may use the questions set forth in the Appendix G to assess the significance of a project’s environmental effects, and the use of Appendix G as a significance threshold is routinely sanctioned by the courts (although such use is not mandatory). Based on the Appendix G questions regarding cultural resources, a project would have a significant impact if the project would:

Threshold CUL-1: Cause a substantial adverse change in the significance of a historical resource pursuant to Section 15064.5;

Threshold CUL-2: Cause a substantial adverse change in the significance of an archaeological resource pursuant to Section 15064.5; or

Threshold CUL-3: Disturb any human remains, including those interred outside of formal cemeteries.

Methodology

SCCIC Records Search

A records search for the Project was conducted on September 26 and October 4, 2017, at the California Historical Resources Information System (CHRIS) South Central Coastal Information Center (SCCIC) housed at California State University at Fullerton. The records search included a review of all recorded cultural resources (archaeological and historic architectural) and previous studies within the Project and a 0.5-mile radius. Then, on April 14, 2021, an updated records search was requested from the SCCIC and included a review of all recorded cultural resources within the Project.

The results of the SCCIC cultural resources records search indicated that a total of 143 cultural resource studies have been conducted within the one-half mile radius of the Planning Area. Of these 143 studies, 83 have been conducted within the city’s limits. The results also indicated that a total of 51 cultural resources have been recorded within the one-half mile radius of the city. Of the 51 cultural resources previously recorded, 22 are located within the Planning Area limits (see **Table 3.4-1, *Previously Recorded Cultural Resources***). These 22 resources consist of six prehistoric archaeological sites, one protohistoric archaeological site, seven historic archaeological sites, seven historic architectural resources, and one California Historical Landmark.

**TABLE 3.4-1
 PREVIOUSLY RECORDED CULTURAL RESOURCES**

Permanent No. (P19-)	Trinomial (CA-LAN)	Description	Date Recorded	Eligibility
000088	000088	Prehistoric archaeological site consisting of shell midden, “workshop” and “flint chips”.	1939	N/A
000098	000098	Prehistoric archaeological site consisting of the Gabrielino village of <i>Suangna</i> . The village was originally recorded as containing a shell midden, burials, and artifacts such as tubular stone pipes, abrading stones, pottery, manos, metates, mortars, pestles, steatite bowls, etc. The village was designated as LAN-013, a County Point of Historical Interest in 1972.	1939; 1972; 1977; 2000	N/A
000106	000106	Prehistoric archaeological site consisting of shell, points, mortars, shell beads, projectile points, etc.	1939	N/A
000794	000794	Prehistoric archaeological site consisting of a scatter of shell and artifacts.	1977	N/A
000795	000795	Prehistoric archaeological site described as a scatter of flakes, shell, bone, and other artifacts.	1977	N/A
002682	002682	Protohistoric archaeological site consisting of a burial ground with midden soil and over 500 plus artifacts made up of shell beads, projectile points, bone awls, glass trade beads, steatite pipe fragments, and other steatite objects.	1998	N/A
002942	002942H	Historic archaeological site consisting of wooden posts found during construction of rail lines.	2001	N/A
003063	003063H	Historic archaeological site consisting of a wood box culvert exposed during grading.	2001	N/A
003064	003064H	Historic archaeological site consisting of a septic tank exposed during construction.	2002	N/A

Permanent No. (P19-)	Trinomial (CA-LAN)	Description	Date Recorded	Eligibility
003065	003065H	Historic archaeological site consisting of 10 wooden railroad trestle piles exposed during grading below current railroad grade.	2002	N/A
003066	003066H	Historic archaeological site consisting of a brick septic tank and concrete foundation	2002	N/A
003067	003067H	Historic archaeological site consisting of two concrete features likely associated with the former Southern Pacific Railroad tracks.	2001	N/A
004357	-	Prehistoric archaeological site consisting of a dispersed shell deposit.	1979	N/A
180782	-	Historic architectural resource consisting of a one-story family dwelling.	1994	N/A
180783	-	Historic architectural resource consisting of a one-story frame building for the Pacific Electric Watson Station.	1994	N/A
180785	-	Historic architectural resource consisting of a complex (Van Vorst Furniture Company) of three industrial buildings.	1994	N/A
186868	-	Historic architectural resource consisting of the Kinder Morgan Tank Storage Terminals, LLC – made up of a storage tank facility site for oil products, utility and office structures, pump facilities, roads, etc.	2003	N/A
187085	-	California Historical Landmark # 963 –The Mojave Road which starts near Los Angeles Harbor to Cajon Pass and across the Mojave Desert to Nevada State Line. This landmark has been described as unique for its significance as an Indian trail, a federal government supply, a freight and emigrant wagon route, and a recreational trail.	1989	N/A
187942	-	Historic architectural resource consisting of the Union Pacific Railroad Bridge.	2006	6Y
188395	-	Historic architectural resource consisting of the Dominguez Refinery, Shell Oil Company.	2007	N/A
188476	-	Historic architectural resource consisting of the 7-Eleven Olympic Velodrome –concrete cycling track.	2000	N/A
189309	-	Historic archaeological site consisting of two circular brick structures identified as standpipes used for flood irrigation.	2011	N/A

NOTES:

3B: Appears eligible for National Register (NR) both individually and as a contributor to a NR eligible district through survey evaluation.

6Y: Determined ineligible for NR by consensus through Section 106 process – Not evaluated for California Register (CR) or local listing.

2S2: Individual property determined eligible for NR by a consensus through Section 106 process. Listed in the CR.

6Z: Found ineligible for NR, CR or local designation through survey evaluation.

SOURCE: Prepared by Environmental Science Associates based on SCCIC records search.

Sacred Lands File Search

The Native American Heritage Commission (NAHC) maintains a confidential Sacred Lands File (SLF) which contains sites of traditional, cultural, or religious value to the Native American community. The NAHC was contacted on August 2, 2021, to request a search of the SLF. The NAHC responded on August 30, 2021, indicating that the results of the SLF search were

negative; however, the NAHC indicated that the absence of specific site information does not mean the absence of cultural resources in a project³⁷.

Review of Historic Topographic Maps and Aerial Photographs

Historic topographic maps and aerial photographs were examined to provide historical information about land uses of the city and to contribute to an assessment of the Planning Area's archaeological sensitivity. Available topographic maps include the 1896 Redondo 15-minute quadrangle; the 1902 Downey 15-minute quadrangle; and the 1924 Compton 6-minute quadrangle. Historic aerial photographs were available for the years of 1952, 1963, 1972, 1980, 2000-2018³⁸ and 2021³⁹.

Review of the 1896 historic topographic map indicates that a large slough currently known as the Dominguez Slough was located within the northeast portion of the city. A few unnamed roads and structures are also depicted in the northernmost and southernmost portions of city, but for the most part, the city appears to be largely undeveloped. The 1902 historic topographic map depicts the Southern Pacific Railroad crossing the southeast portion of the city. Compton Creek and Watson Lakes are also depicted in the southeast portion. The 1924 historic topographic map shows that Dominguez Slough has shrunk in size and that a channel for the slough has been constructed on a northwest-southeast direction (crossing the central portion of the city). Additionally, development of tank farms and an oil refinery (Shell Oil Refinery) are exhibited in the southern portion of the city.

Review of the 1952 historic aerial photograph shows that additional tank farms had been constructed in the southern portion of the city. Residential development is also observed in the northern and southern portions by this time; the central portion is also observed as developed with some residences, but it is surrounded by agricultural fields. Between 1952 and the current year (2021), the city is depicted as approximately 95 percent developed with residential, industrial, and commercial uses, and infrastructure. The remaining 5 percent appears to be made up of open spaces, such as parks.

³⁷ Green, Andrew, 2021. Results of a Sacred Lands File Search through the Native American Heritage Commission; document titled "Carson Regional Groundwater Monitoring Report Water Project, Los Angeles County". Prepared on August 30, 2021.

³⁸ Historicaerials.com, 2021. Historic aerials for the years of 1952, 1963, 1972, 1980, 2000–2018.

³⁹ Bing Maps, 2021. Aerial imagery of the City of Carson.

Project Impact Analysis

Adversely Affect Significance of a Historical Resource

Threshold CUL-1: The Project would have a significant impact if future development allowed by Carson2040 would cause a substantial adverse change in the significance of a historical resource pursuant to Section 15064.5.

Impact CUL-1: *The Project would cause a substantial adverse change in the significance of a historical resource pursuant to Section 15064.5. (Significant and Unavoidable)*

Future development proposals initiated under the proposed General Plan update that include construction, demolition, or alteration of buildings/structures/objects/landscape features (hereafter referred to as “historic resources” or “properties”) have the potential to cause a substantial adverse change to historical resources as defined by CEQA Guidelines Section 15064.5. Anticipated development under the proposed General Plan update and redevelopment or revitalization of underutilized properties could result in a substantial adverse change in the significance of a historical resource through physical demolition, destruction, relocation, or alteration of the resource. New construction through infill development on vacant property could result in a substantial adverse change in the significance of a historical resource through alteration of the resource’s immediate surroundings. The CEQA Guidelines note that generally, a project that follows the Secretary of the Interior’s Standards for the Treatment of Historic Properties is considered as mitigated to a level of less than significant impact on the historical resource. Projects that propose alteration of a historical resource and that do not adhere to these standards have the potential to result in a substantial adverse change in the significance of a historical resource. Other projects that propose demolition or alteration of, or construction adjacent to, existing historic resources over 45 years in age (the California Office of Historic Preservation’s age threshold for consideration as historical resources), could also result in a substantial adverse change in the significance of a historical resource. Changes in the setting of historic buildings and structures can result from the introduction of new visible features, significant landscape changes, or other alterations that change the historic integrity of the setting of a significant resource.

The results of the cultural resources records search indicate that a total of 143 cultural resource studies have been conducted within the 0.5-mile radius of the Planning Area. Of the 143 studies, 83 have been conducted within the Planning Area limits. The results of the cultural resources records search also indicated that a total of 51 cultural resources have been recorded within the one-half mile radius of the city. Of the 51 cultural resources previously recorded, 22 are located within the Planning Area limits (see Table 3.4-1). These 22 resources consist of six prehistoric archaeological sites, one protohistoric archaeological site, seven historic archaeological sites, seven historic architectural resources, and one California Historical Landmark.

The SLF records search revealed that no known Native American resources from the NAHC database have been recorded within the city; however, the NAHC noted “that the absence of

specific site information in the Sacred Lands File does not indicate the absence of Native American cultural resources in any APE.”⁴⁰

Any property that is or becomes of historic age may be a potential historical resource. A review of historic aerials indicates that there are numerous properties within the city that are more than 45 years in age. Any project that proposes the demolition, destruction, relocation, or alteration of property more than 45 years in age could result in a significant impact on historical resources.

The proposed General Plan policies listed below would help to identify, protect, preserve, and promote the preservation of historical resources. However, these policies do not require the identification and evaluation of historic-age properties to determine if there are historical resources within or nearby a proposed project site that could be adversely impacted by a proposed project, nor do they require the retention or rehabilitation of historical resources.

Mitigation is required to ensure that historical resources are properly identified and that impacts on any identified historical resources are reduced. However, impacts on historical resources that are demolished or altered in an adverse manner such that they are no longer able to convey their historical significance and such that they are no longer eligible for inclusion in the California Register typically cannot be mitigated to a level of less than significant.^{41,42}

Proposed General Plan Policies that Address the Impact

Open Space and Environmental Conservation

Guiding Policies

- OSEC-G-6 Identify, protect, and preserve important archaeological, paleontological, tribal, and historic resources for their aesthetic, scientific, educational, and cultural values.
- OSEC-G-7 Celebrate Carson’s unique cultural history by promoting an understanding and appreciation of its history with residents.

Implementing Policies

- OSEC-P-8 Development projects shall comply with state and federal law that upon discovery of Native American remains or archaeological artifacts during construction, all activity will cease until qualified professional archaeological examination and reburial in an appropriate manner is accomplished.

⁴⁰ Totton, Gayle, 2017. Sacred Lands File search results for the Proposed Carson General Plan Update Project, City of Carson; Carson, Long Beach, and South Gate USGS Quadrangles, Los Angeles County, California.

⁴¹ CEQA Guidelines Section 15126.4(b)(2) states that in some circumstances, documentation of an historical resource, by the way of narrative, photographs or architectural drawings, as mitigation for the effects of demolition of the resource will not mitigate the effects to the point where clearly no significant effect on the environment would occur.

⁴² In *League of Protection of Oakland’s Architectural and Historic Resources v. City of Oakland* (1997) the appellate court found that “Documentation of the historical features of the building and exhibition of a plaque do not reasonably begin to alleviate the impacts of its destruction. A large historical structure, once demolished, normally cannot be adequately replaced by reports and commemorative markers. Nor, we think, are the effects of the demolition reduced to a level of insignificance by a proposed new building with unspecified design elements which may incorporate features of the original architecture into an entirely different shopping center. This is so particularly where, as here, the plans for the substitute building remain tentative and vague. We conclude that the stated mitigation measures do not reduce the effects of the demolition to less than a level of significance.”

OSEC-P-9 For development and redevelopment proposals in archaeologically-or culturally-sensitive areas of Carson, require an assessment of the potential presence of archaeological and tribal cultural resources, including a site survey and a records search of the California Historical Resources Information System at the South Central Coastal Information Center (SCCIC). As warranted by the results of the assessment, require additional studies to identify and address project-specific impacts on archaeological and tribal cultural resources.

The City should incorporate the study recommendations as project conditions of approval to ensure that impacts on archaeological and/or tribal cultural resources are mitigated to the extent possible. Studies should be prepared according to National Register Bulletin 24: Guidelines for Local Surveys: A Basis for Preservation Planning and the Secretary of the Interior's Standards and Guidelines for Archaeology and Historic Preservation.

OSEC-P-10 Using an annually updated Archaeological Resource Sensitivity Map, review proposed development projects to determine whether a site contains known prehistoric or historic cultural resources and/or to determine the potential for discovery of additional cultural resources.

Mitigation Measures

MM-CUL-1. Prior to development of individual projects that are subject to CEQA (California Environmental Quality Act) review (i.e., non-exempt projects) and within areas that contain properties more than 45 years old, the project proponent shall retain a qualified architectural historian, defined as meeting the Secretary of the Interior's Professional Qualification Standards for architectural history, to conduct a historic resources assessment including: a records search at the South Central Coastal Information Center; a review of pertinent archives, databases, and sources; a pedestrian field survey; recordation of all identified historic resources on California Department of Parks and Recreation 523 forms; and preparation of a technical report documenting the methods and results of the assessment. All identified historic resources will be assessed for the project's potential to result in direct and/or indirect effects on those resources and any historic resource that may be affected shall be evaluated for its potential significance under national and state criteria prior to the City's approval of project plans and publication of subsequent CEQA documents. The qualified architectural historian shall provide recommendations regarding additional work, treatment, or mitigation for affected historical resources to be implemented prior to their demolition or alteration. Impacts on historical resources shall be analyzed using CEQA thresholds to determine if a project would result in a substantial adverse change in the significance of a historical resource. If a potentially significant impact would occur, the City shall require appropriate mitigation to lessen the impact to the degree feasible.

Significance After Mitigation

It is impossible to know if future development will avoid substantial adverse impacts on historical resources without information on specific future projects. As a result, it is reasonable to assume that some historical resources would be demolished or altered in an adverse manner over the lifetime of the proposed General Plan update. Implementation of Mitigation Measure MM CUL-1 stated above would help to reduce the severity of the impact. However, even with the implementation this measure, this impact would remain significant and unavoidable.

Adversely Affect Significance of an Archaeological Resource

Threshold CUL-2: The Project would have a significant impact if future development allowed by Carson2040 would cause a substantial adverse change in the significance of an archaeological resource pursuant to Section 15064.5.

Impact CUL-2: *The Project would not cause a substantial adverse change in the significance of an archaeological resource pursuant to Section 15064.5. (Less than Significant)*

As discussed above in Impact CUL-1, the cultural resources records search indicated that a total of 143 cultural resource studies have been conducted within the one-half mile radius of the Planning Area. Of these 143 studies, 83 have been conducted within the city's limits. The results of the cultural resources records search also indicated that a total of 51 cultural resources have been recorded within the one-half mile radius of the city. Of the 51 cultural resources previously recorded, 22 are located within the city limits (see Table 3.4-1). These 22 resources consist of six prehistoric archaeological sites, one protohistoric archaeological site, seven historic archaeological sites, seven historic architectural resources, and one California Historical Landmark.

Future development proposals initiated under the proposed General Plan update that include construction-related ground disturbance (e.g., grubbing/clearing, grading, excavation, trenching, and boring) are activities that have potential to impact, or cause a substantial adverse change to, archaeological resources. Future development that does not require ground-disturbing activities would cause no impacts on archaeological resources.

Anticipated development in the city would occur through infill development on vacant property, and through redevelopment or revitalization of underutilized properties, which could result in damage to prehistoric and historic archaeological resources as a result of construction-related ground disturbance. In addition, infrastructure and other improvements requiring ground disturbance could result in damage to or destruction of archaeological resources buried below the ground surface.

The SLF records search through the NAHC yielded negative results; however, the NAHC noted “that the absence of specific site information in the *Sacred Lands File* does not indicate the absence of Native American cultural resources in any APE.”⁴³

Based on review of historic topographic maps, the city appears to have been a highly suitable area for the inhabitation of prehistoric people. For instance, the city once contained a marshy area known as the Dominguez Slough, which would have provided native inhabitants with food resources, such as plants and animals. The Dominguez Slough is known to have been channelized in the mid-1900s in order to provide flood protection in the South Bay area. The records search information has additionally confirmed that archaeological resources exist within the city. As a result of all these findings, the potential for encountering archaeological resources in the city is considered high. Significant archaeological sites are those that have the potential to contain intact

⁴³ Totton, Gayle, 2017. Sacred Lands File search results for the Proposed Carson General Plan Update Project, City of Carson; Carson, Long Beach, and South Gate USGS Quadrangles, Los Angeles County, California.

deposits of artifacts, associated features, and dietary remains that could contribute to the regional prehistoric or historic record, or that may be of cultural or religious importance to Native American groups. Any project that proposes ground disturbance could result in a significant impact on archaeological resources.

Projects that identify significant archaeological resources (i.e., those resources that qualify as historical or unique archaeological resources pursuant to CEQA Guidelines Section 15064.5 and Public Resources Code Section 21083.2, respectively) and preserve them through avoidance, permanent conservation easements, capping, or incorporation into open space, would reduce impacts on archaeological resources to a level that is less than significant. If preservation in place is not feasible, projects that conduct data recovery to recover the scientifically consequential information contained in the archaeological resource would also reduce impacts to less than significant. Furthermore, the proposed General Plan update includes policies that would help reduce the impact of future development on archaeological resources by requiring that development and redevelopment projects require an assessment (including a site survey and cultural resources records search) to assess the potential for finding archaeological resources. Additionally, if archaeological resources and/or Native American remains are found during ground disturbance for a project, all activity shall cease until the find has been evaluated a qualified professional archaeologist. Finally, mitigation is required to ensure that significant archaeological resources are properly identified and that the impact on any identified significant resources is reduced.

Proposed General Plan Policies that Address the Impact

Guiding Policy OSEC-G-6 and Implementing Policies OSEC-P-8, OSEC-P-9, and OSEC-P-10 as discussed under Impact CUL-1.

Mitigation Measures

MM CUL-2. Prior to development of individual projects that are subject to CEQA (California Environmental Quality Act) review (i.e., non-exempt projects) and involve ground disturbance, the project proponent shall retain a qualified archaeologist, defined as meeting the Secretary of the Interior's Professional Qualification Standards for archaeology, to conduct an archaeological resources assessment including: a records search at the South Central Coastal Information Center; a Sacred Lands File search at the Native American Heritage Commission; a pedestrian field survey; recordation of all identified archaeological resources on California Department of Parks and Recreation 523 forms; an assessment of the project area's archaeological sensitivity and the potential to encounter subsurface archaeological resources and human remains; subsurface investigation to define the horizontal and vertical extents of any identified archaeological resources; and preparation of a technical report documenting the methods and results of the study. All identified archaeological resources shall be assessed for the project's potential to result in direct and/or indirect effects on those resources and any archaeological resource that cannot be avoided shall be evaluated for its potential significance prior to the City's approval of project plans and publication of subsequent CEQA documents. The qualified archaeologist shall provide recommendations regarding protection of avoided resources and/or recommendations for additional work, treatment, or mitigation of significant resources that will be affected by the project.

Significance After Mitigation

The Project could result in a potentially significant impact with respect to archaeological resources during construction due to the high potential for archaeological resources to be encountered. However, implementation of Mitigation Measure MM CUL-2 would reduce this impact to a less than significant level.

Disturb Human Remains

Threshold CUL-3: The Project would have a significant impact if future development allowed by Carson2040 would disturb any human remains, including those interred outside of formal cemeteries.

Impact CUL-3: *The Project would not disturb any human remains, including those interred outside of formal cemeteries. (Less than Significant)*

Impacts on human remains, including those interred outside of dedicated cemeteries, could occur as a result of future development proposals initiated under the proposed General Plan update that include ground disturbance (e.g., grubbing/clearing, grading, excavation, trenching, and boring), as described above under Impact CUL-2. Future development that does not require ground-disturbing activities would cause no impact on human remains.

Although the SLF search through the NAHC yielded negative results, the SCCIC records search identified a Native American village (*Suangna*) and several prehistoric archaeological sites with burials in the city. As such, future development in the city has the potential to encounter human remains within the city during ground-disturbing activities. The treatment of human remains is regulated by California Health and Safety Code Section 7050.5 and the treatment of Native American human remains is further prescribed by Public Resources Code Section 5097.98.

California Health and Safety Code Section 7050.5 requires that in the event human remains are discovered, the County Coroner be contacted to determine the nature of the remains. In the event the remains are determined to be Native American in origin, the Coroner is required to contact the NAHC within 24 hours to relinquish jurisdiction.

California Public Resources Code Section 5097.98 provides procedures in the event human remains of Native American origin are discovered during project implementation. Public Resources Code 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. Public Resources Code 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. The MLD has 48 hours from the time of being granted access to the site by the landowner to inspect the discovery and provide recommendations to the landowner for the treatment of the human remains and any associated grave goods. In the event that no descendant is identified, or the descendant fails to make a recommendation for disposition, 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.

These regulations are applicable to all projects within the city. In addition, the proposed General Plan update includes a policy that would require future development projects to comply with state and federal law upon discovery of Native American remains. Adherence to existing regulations and the proposed General Plan policy would ensure that the Project's impact associated with the disturbance of human remains would be less than significant.

Proposed General Plan Goals and Policies that Address the Impact

Guiding Policy OSEC-G-6 and Implementing Policy OSEC-P-8 as discussed under Impact CUL-1.

Mitigation Measures

None are required.

3.4.5 Cumulative Impact Analysis

The cumulative analysis for impacts on cultural resources considers a broad regional system of which the resources are a part. The geographic context for the analysis of cumulative impacts associated with cultural resources is the Los Angeles Basin, including Los Angeles and Orange counties, where common patterns of prehistoric and historic development have occurred.

Historical Resources

Future development in the Los Angeles Basin, including growth anticipated under the proposed General Plan update, could result in a substantial adverse change in the significance of historical resources, thus resulting in a potentially significant cumulative impact. There are no federally or state-designated or listed properties within the city. However, the city has not been subject to a comprehensive citywide historic resources survey and all historic-age structures are potential historical resources. Therefore, there is the possibility growth anticipated under the proposed General Plan update could adversely affect historical resources. The City cannot be sure that all impacts on historical resources can be mitigated to less than significant levels. Even with implementation of proposed General Plan policies, as well as applicable local, state, and federal laws and MM-CUL-1, the Project's contribution to this potentially significant cumulative impact would be cumulatively considerable.

Archaeological Resources

Future development in the Los Angeles Basin, including growth anticipated under the proposed General Plan update, could result in a substantial adverse change in the significance of archaeological resources, thus resulting in a potentially significant cumulative impact. There are a total of 14 archaeological resources (including six prehistoric archaeological sites, one protohistoric archaeological site, and seven historic archaeological sites) and one California Historical Landmark within the city. Additional unrecorded archaeological resources may also exist. Future development projects allowed under the Project may involve grading, excavation, or other ground-disturbing activities, which could disturb or damage unknown archaeological resources. Consequently, the proposed General Plan update may have the potential to contribute

to cumulative impacts on archaeological resources. However, with implementation of proposed General Plan policies, as well as applicable local, state, and federal laws and MM-CUL-2, the Project's contribution to this potentially significant cumulative impact would not cumulatively be considerable.

Human Remains

Future development in the Los Angeles Basin, including growth anticipated under the proposed General Plan update, could disturb human remains, including those interred outside of formal cemeteries, thus resulting in a potentially significant cumulative impact. All future development would be required to comply with state laws pertaining to the discovery of human remains. Accordingly, if human remains of Native American origin are discovered during project construction, the project proponent and/or the City would be required to comply with state laws relating to the disposition of Native American burials (e.g., California Health and Safety Code Section 7050.5 and Public Resources Code Section 5097.98). For these reasons, the Project's contribution to this potentially significant cumulative impact would not be cumulatively considerable.

3.5 Energy

3.5.1 Introduction

This section assesses the potential environmental impacts related to energy use from future development allowed under the Project. This section describes the existing energy usage in the Planning Area as well as the relevant federal, state, and local regulations and programs. Greenhouse gas emissions are evaluated in Section 3.7, *Greenhouse Gas Emissions*, of this Draft EIR.

Comments received in response to the Notice of Preparation (NOP) and Recirculated NOP regarding topics covered in this section include the following:

- The Southwest Regional Council of Carpenters commented that the City of Carson (City) should require the Project to be built to standards exceeding the current 2019 California Green Building Code and 2020 County of Los Angeles Green Building Standards Code to mitigate the Project's environmental impacts and to advance progress towards the State of California's environmental goals.

3.5.2 Environmental Setting

Regional Context

Electricity

Electricity, a consumptive utility, is a human-made resource. The production of electricity requires the consumption or conversion of energy resources, including water, wind, oil, gas, coal, solar, geothermal, and nuclear resources, into energy. The delivery of electricity involves a number of system components, for distribution and use. The electricity generated is distributed through a network of transmission and distribution lines commonly called a power grid.

Energy capacity, or electrical power, is generally measured in watts (W) while energy use is measured in watt-hours (Wh). For example, if a light bulb has a capacity rating of 100 W, the energy required to keep the bulb on for 1 hour would be 100 Wh. If ten 100 W bulbs were on for 1 hour, the energy required would be 1,000 Wh or 1 kilowatt-hour (kWh). On a utility scale, a generator's capacity is typically rated in megawatts (MW), which is 1 million W, while energy usage is measured in megawatt-hours (MWh) or gigawatt-hours (GWh), which is 1 billion Wh.

Southern California Edison (SCE) provides electrical services to approximately 15 million people, 15 counties, 180 incorporated cities (including the city of Carson), 5,000 large businesses, and 280,000 small businesses throughout its 50,000-square-mile service area, across central, coastal and southern California, an area bounded by Mono County to the north, Ventura County to the west, San Bernardino County to the east, and Orange County to the south.¹ SCE produces and purchases energy from a mix of conventional and renewable generating sources.

¹ Southern California Edison (SCE), 2021a. About Us >Who We Are, <https://www.sce.com/about-us/who-we-are>, accessed June 2021.

SCE generates power from a variety of energy sources, including large hydropower (greater than 30 MW), coal, gas, nuclear sources, and renewable resources, such as wind, solar, small hydropower (less than 30 MW), and geothermal sources. In 2020, the SCE power system experienced a peak demand of 23,133 MW (the most recent year for which data are available).² Approximately 43 percent of the SCE 2020 electricity purchases were from renewable sources, which is higher than the 32 percent statewide percentage of electricity purchases from renewable sources.³ The annual electricity sale to customers in 2020 was approximately 85,399,000 MWh.⁴

Natural Gas

Natural gas is a combustible mixture of simple hydrocarbon compounds (primarily methane) that is used as a fuel source. Natural gas consumed in California is obtained from naturally occurring reservoirs but relies upon out-of-state imports for nearly 90 percent of its natural gas supply.⁵ A majority of natural gas consumed in California is for electricity generation, along with the industrial, residential, and commercial sections.⁶ Among energy commodities consumed in California, natural gas accounts for one-third of total primary energy consumption in terms of British thermal units (BTU).⁷ Natural gas is typically measured in terms of cubic feet (cf) or BTU.

Natural gas is provided to the city by Southern California Gas (SoCalGas). SoCalGas is the principal distributor of natural gas in Southern California, serving residential, commercial, and industrial markets. SoCalGas serves approximately 21.6 million customers in more than 500 communities encompassing approximately 20,000 square miles throughout Central and Southern California, from the city of Visalia to the Mexican border.⁸

SoCalGas receives gas supplies from several sedimentary basins in the western U.S. and Canada, including supply basins located in New Mexico (San Juan Basin), West Texas (Permian Basin), the Rocky Mountains, and Western Canada as well as local California supplies.⁹ The traditional, southwestern U.S. sources of natural gas will continue to supply most of SoCalGas' natural gas demand. The Rocky Mountain supply is available but is used as an alternative supplementary supply source, and the use of Canadian sources provide only a small share of SoCalGas supplies

² SCE, 2021b. *2020 Annual Report*, p. 2. <https://www.edison.com/content/dam/eix/documents/investors/sec-filings-financials/2020-eix-sce-annual-report.pdf>, accessed November 2021.

³ SCE, 2021c. *2020 Sustainability Report*, p. 81. <https://www.edison.com/content/dam/eix/documents/sustainability/eix-2020-sustainability-report.pdf>, accessed November 2021.

⁴ SCE, 2021b. *2020 Annual Report*, p. 2. <https://www.edison.com/content/dam/eix/documents/investors/sec-filings-financials/2020-eix-sce-annual-report.pdf>, accessed November 2021.

⁵ CEC, 2021a. Supply and Demand of Natural Gas in California, <https://www.energy.ca.gov/data-reports/energy-almanac/californias-natural-gas-market/supply-and-demand-natural-gas-california>, accessed June 2021.

⁶ CEC, 2021a. Supply and Demand of Natural Gas in California, <https://www.energy.ca.gov/data-reports/energy-almanac/californias-natural-gas-market/supply-and-demand-natural-gas-california>, accessed June 2021.

⁷ CEC, 2021b. California Natural Gas Industry, https://www.energy.ca.gov/almanac/naturalgas_data/, accessed June 2021.

⁸ SoCalGas, 2021. Company Profile, <http://www.socalgas.com/about-us/company-info.shtml>, accessed June 2021.

⁹ California Gas and Electric Utilities, 2020. *2020 California Gas Report*, p. 111.

due to the high cost of transport.¹⁰ The annual natural gas sale to customers in 2020 was approximately 888,775 million cf.¹¹

Transportation Energy

According to the California Energy Commission (CEC), transportation and fuel production accounted for about 51 percent of California's total energy consumption in 2018 based on a carbon dioxide equivalent basis.¹² In 2020 (the most recent year for which data are available), California consumed 12.6 billion gallons of gasoline and 3.6 billion gallons of diesel fuel.¹³ Petroleum-based fuels account for more than 90 percent of California's transportation fuel use.¹⁴ However, the state is now working on developing flexible strategies to reduce petroleum use. California has implemented several policies, rules, and regulations to improve vehicle efficiency, increase the development and use of alternative fuels, reduce air pollutants and GHGs from the transportation sector, and reduce vehicle miles traveled (VMT). The CEC predicts that the demand for gasoline and transportation fossil fuels in general will continue to decline over the next 10 years primarily due to improvements in fuel efficiency and increased electrification.¹⁵ According to fuel sales data from the CEC, fuel consumption in Los Angeles County (County) was approximately 2.8 billion gallons of gasoline and 0.61 billion gallons of diesel fuel in 2020.¹⁶

Existing Conditions

The city of Carson is a mix of residential, commercial, retail, office, industrial, school, recreational, and open space land uses. Everyday operational activities at these residences and businesses result in the energy demand associated with building electricity and natural gas consumption and transportation fuel consumption. However, data with respect to the exact activity level (i.e., utility consumption, trip generation) and building energy standards for each residential or business use is not obtainable. Therefore, existing energy estimates are based generally on default parameters in the California Emissions Estimator (CalEEMod) for area and building energy sources, except for applying the historical data option for operational building energy demand, which adjusts building energy demand to the 2005 standards which were in effect when CARB developed its Scoping Plan 2020 No Action Taken predictions, assuming no wood stoves and no fireplaces in multi-family residential units. Existing emissions for mobile sources are based on VMT (provided by Fehr & Peers) and on-road mobile source fuel demand

¹⁰ California Gas and Electric Utilities, 2020. *2020 California Gas Report*, p. 111.

¹¹ California Gas and Electric Utilities, 2021. *2021 Supplemental California Gas Report*, p. 28. Daily natural gas usage in 2019 was 2,435 million cf, annual value derived by multiplying daily values by 365 days.

¹² CEC, 2021c. *Final 2020 Integrated Energy Policy Report*, March 2021, p. 4.

¹³ CEC, 2020. California Retail Fuel Outlet Annual Reporting (CEC-A15) Results, 2010–2020 CEC-A15 Results and Analysis, <https://www.energy.ca.gov/sites/default/files/2021-09/2010-2020%20CEC-A15%20Results%20and%20Analysis.xlsx>, accessed November 2021. Diesel is adjusted to account for retail (49 percent) and non-retail (51 percent) diesel sales.

¹⁴ CEC, 2016. *2016–2017 Investment Plan Update for the Alternative and Renewable Fuel and Vehicle Technology Program*, May 2016.

¹⁵ CEC, 2021c. *Final 2020 Integrated Energy Policy Report*, March 2021, p. 228.

¹⁶ CEC, 2020. California Retail Fuel Outlet Annual Reporting (CEC-A15) Results, 2010–2020 CEC-A15 Results and Analysis, <https://www.energy.ca.gov/sites/default/files/2021-09/2010-2020%20CEC-A15%20Results%20and%20Analysis.xlsx>, accessed November 2021. Diesel is adjusted to account for retail (49 percent) and non-retail (51 percent) diesel sales.

factors from the CARB on-road vehicle emissions factors (EMFAC2021) model. **Table 3.5-1, *Estimated Existing Operational Energy Demand***, presents the regional emissions from the existing development in the city of Carson.

**TABLE 3.5-1
 ESTIMATED EXISTING OPERATIONAL ENERGY DEMAND**

Energy Type	Annual Quantity^{1, 2}
Electricity	
Building Energy	7,219 MWh
Water Conveyance and Treatment	1,404 MWh
Total Electricity	8,623 MWh
Natural Gas	
Existing Development plus Carson2040 New Development (2040)	
Building Energy	12,056,220 cf
Mobile Sources	57,641 cf
Total Natural Gas	12,113,861 cf
Transportation	
Gasoline	59,511,413 gallons
Diesel	5,047,480 gallons

NOTES: MWh = megawatt-hours; cf = cubic feet

¹ Detailed calculations are provided in Appendix C of this Draft EIR.

² Totals may not add up due to rounding of decimals.

SOURCE: Prepared by Environmental Science Associates based on Appendix C.

3.5.3 Regulatory Framework

This section provides the relevant federal, state, regional, and local regulations applicable to the Project.

Federal

Energy Policy Act of 1992

The Energy Policy Act of 1992 (1992 Act) was passed to reduce US dependence on foreign petroleum and improve air quality. The 1992 Act includes several provisions intended to build inventory of alternative fuel vehicles (AFVs) in large, centrally fueled fleets in metropolitan areas. The 1992 Act requires certain federal, state, and local governments and private fleets to purchase a percentage of light-duty AFVs capable of running on alternative fuels each year. Financial incentives are also included in the 1992 Act. Federal tax deductions will be allowed for businesses and individuals to cover the incremental cost of AFVs. States are also required by the Energy Policy Act to consider a variety of incentive programs to help promote AFVs.

Energy Policy Act of 2005

The Energy Policy Act of 2005 includes provisions for renewed and expanded tax credits for electricity generated by qualified energy sources, such as landfill gas; provides bond financing, tax incentives, grants, and loan guarantees for clean renewable energy and rural community electrification; and establishes a federal purchase requirement for renewable energy.

U.S. Department of Transportation, U.S. Department of Energy, and U.S. Environmental Protection Agency

On the federal level, the U.S. Department of Transportation, U.S. Department of Energy, and U.S. Environmental Protection Agency (EPA) are three agencies with substantial influence over energy policies related to transportation fuels consumption. Generally, federal agencies influence transportation energy consumption through establishment and enforcement of fuel economy standards for automobiles and light trucks through funding energy-related research and development projects, and through funding for transportation infrastructure projects.

Established by the U.S. Congress in 1975, the Corporate Average Fuel Economy (CAFE) standards reduced energy consumption by increasing the fuel economy of cars and light trucks. The National Highway Traffic Safety Administration (NHTSA), an agency within the U.S. Department of Transportation, and the EPA jointly administered the CAFE standards. The US Congress has specified that CAFE standards must be set at the “maximum feasible level” with consideration given to: (1) technological feasibility; (2) economic practicality; (3) effects of other standards on fuel economy; and (4) need for the nation to conserve energy. In 2018, the EPA published the final rule for the One National Program on Federal Preemption of State Fuel Economy Standards that finalizes the Safer Affordable Fuel-Efficient (SAFE) Vehicles Rule. The SAFE Vehicles Rule maintains the 2020 CAFE and CO₂ standards for model years 2021 through 2026.¹⁷ On January 20, 2021, President Biden issued Executive Order 13990 “Protecting Public Health and the Environment and Restoring Science to Tackle the Climate Crisis” which directed the EPA to consider whether to propose suspending, revising, or rescinding the standards previously revised under the SAFE Vehicles Rule. As of November 1, 2021, the EPA has not yet taken final action on the reconsideration. Refer to Section 3.7, *Greenhouse Gas Emissions*, of this Draft EIR, for additional information.

Fuel efficiency standards for medium- and heavy-duty trucks have been jointly developed by US EPA and NHTSA. In August 2016, the EPA and NHTSA finalized Phase 2 standards for medium and heavy-duty vehicles through model year 2027 that will improve fuel efficiency and cut carbon pollution. The Phase 2 heavy-duty truck standards require the phase-in of a 5 to 25 percent reduction in fuel consumptions over the 2017 baseline depending on the compliance year and vehicle type.

¹⁷ Federal Register, 2018. Vol. 83, No. 165. August 24. Proposed Rules.

State

California Building Standards Code (Title 24, Parts 6 and 11)

The California Building Energy Efficiency Standards for Residential and Nonresidential Buildings (California Code of Regulations [CCR], Title 24, Part 6) were adopted to ensure that building construction and system design and installation achieve energy efficiency and preserve outdoor and indoor environmental quality. The current California Building Energy Efficiency Standards (Title 24 standards) are the 2019 Title 24 standards, which became effective January 2020. The 2019 Title 24 standards include efficiency improvements to the residential standards for attics, walls, water heating, and lighting; and efficiency improvements to the non-residential standards include alignment with the American Society of Heating and Air-Conditioning Engineers (ASHRAE) 90.1-2013 national standards.¹⁸

The California Green Building Standards Code (CCR, Title 24, Part 11), commonly referred to as the CALGreen Code, became effective 2020. The 2020 CALGreen Code includes mandatory measures for non-residential development related to site development, energy efficiency, water efficiency and conservation; material conservation and resource efficiency; and environmental quality.¹⁹ For example, several definitions related to energy that were added or revised affect electric vehicle (EV) chargers and charging, and hot water recirculation systems. For new multi-family dwelling units, the residential mandatory measures were revised to provide additional EV charging requirements, including quantity, location, size, single EV space, multiple EV spaces, and identification. For non-residential mandatory measures, Table 5.106.5.3.3 of the CALGreen Code, identifying the number of required EV charging spaces has been revised in its entirety. Refer to Section 3.7, *Greenhouse Gas Emissions*, of this Draft EIR, for additional details regarding these standards.

California Appliance Efficiency Regulations

The 2012 Appliance Efficiency Regulations (CCR, Title 20, Sections 1601 through 1608) took effect February 13, 2013. The regulations include standards for both federally regulated appliances and non-federally regulated appliances.

Renewables Portfolio Standard

The state has adopted regulations to increase the proportion of electricity from renewable sources. In 2008, Executive Order S-14-08 expanded the state's Renewable Portfolio Standard (RPS) goal to 33 percent renewable power by 2020. In 2009, Executive Order S-21-09 directed CARB (under its AB 32 authority) to enact regulations to help the state meet the 2020 goal of 33 percent renewable energy. The 33 percent by 2020 RPS goal was codified with the passage of Senate Bill X1-2. This new RPS applied to all electricity retailers in the state, including publicly owned utilities (POUs), investor-owned utilities, electricity service providers, and community choice aggregators. SB 350 (Chapter 547, Statutes of 2015) further increased the RPS to 50 percent by 2030, including interim targets of 40 percent by 2024 and 45 percent by 2027. In 2018, SB 100

¹⁸ CEC, 2018. 2019 Building Energy Efficiency Standards for Residential and Nonresidential Buildings. December.

¹⁹ California Building Standards Commission, 2019. Guide to the 2020 California Green Building Standards Code Nonresidential. November.

further increased California's RPS and requires retail sellers and local publicly-owned electric utilities to procure eligible renewable electricity for 44 percent of retail sales by the end of 2024, 52 percent by the end of 2027, and 60 percent by the end of 2030; and requires that CARB should plan for 100 percent eligible renewable energy resources and zero-carbon resources by the end of 2045.

The California Public Utilities Commission (CPUC) and the CEC jointly implement the RPS program. The CPUC's responsibilities include: (1) determining annual procurement targets and enforcing compliance; (2) reviewing and approving each investor-owned utility's renewable energy procurement plan; (3) reviewing contracts for RPS-eligible energy; and (4) establishing the standard terms and conditions used in contracts for eligible renewable energy.

California Senate Bill 1389

Senate Bill (SB) 1389 (Public Resources Code Sections 25300–25323; SB 1389) requires the CEC to prepare a biennial integrated energy policy report that assesses major energy trends and issues facing the state's electricity, natural gas, and transportation fuel sectors and provides policy recommendations to conserve resources; protect the environment; ensure reliable, secure, and diverse energy supplies; enhance the state's economy; and protect public health and safety (Public Resources Code Section 25301(a)). The Integrated Energy Policy Report provides the results of the CEC's assessments related to energy sector trends, building decarbonization and energy efficiency, zero-emissions vehicles, energy equity, climate change adaptation, electricity reliability in the Southern California region, natural gas assessment, and electricity, natural gas, and transportation energy demand forecasts.

California Assembly Bill 1493 (AB 1493, Pavley)

In response to the transportation sector's large share of California's CO₂ emissions, Assembly Bill (AB) 1493 (commonly referred to as the Pavley regulations), enacted on July 22, 2002, requires CARB to set greenhouse gas (GHG) emission standards for new passenger vehicles, light-duty trucks, and other vehicles manufactured in and after 2009 whose primary use is non-commercial personal transportation. Phase I of the legislation established standards for model years 2009–2016 and Phase II established standards for model years 2017–2025.^{20,21} As discussed above, in September 2019, EPA published the SAFE Vehicles Rule in the federal register (Federal Register, Vol. 84, No. 188, Friday, September 27, 2019, Rules and Regulations, Sections 51310–51363) that maintains the vehicle miles per gallon standards applicable in model year 2020 for model years 2021 through 2026. California and 23 other states and environmental groups in November 2019 in U.S. District Court in Washington, filed a petition for EPA to reconsider the published rule. The Court has not yet ruled on these lawsuits.

²⁰ California Air Resources Board (CARB), 2002. Clean Car Standards—Pavley, Assembly Bill 1493, <http://www.arb.ca.gov/cc/ccms/ccms.htm>, accessed June 2021.

²¹ EPA, 2012. EPA and NHTSA Set Standards to Reduce Greenhouse Gases and Improve Fuel Economy for Model Years 2017–2025 Cars and Light Trucks.

California Air Resources Board

CARB's Advanced Clean Car Program

In 2012, CARB adopted the Advanced Clean Cars emissions-control program, which is closely associated with the emissions standards for passenger vehicles and light-duty trucks discussed above.²² The program requires an increase in the number of zero-emissions vehicle models for years 2015 through 2025 to control smog, soot and GHG emissions. By 2025, zero-emissions vehicles (ZEVs) must be 22 percent of large volume manufacturers overall production.²³ This program includes the Low-Emissions Vehicle (LEV) regulations to reduce criteria pollutants and GHG emissions from light- and medium-duty vehicles; and ZEV regulations to require manufacturers to produce an increasing number of pure ZEVs (meaning battery and fuel cell electric vehicles) with the provision to produce plug-in hybrid electric vehicles (PHEV) between 2018 and 2025.

CARB's Advanced Clean Trucks Program

The Advanced Clean Trucks (ACT) regulations were approved on June 25, 2020, and require that manufacturers sell zero-emissions or near-zero-emissions trucks as an increasing percentage of their annual California sales beginning in 2024. The goal of this proposed strategy is to achieve nitrogen oxide (NOx) and GHG emission reductions through advanced clean technology, and to increase the penetration of the first wave of zero-emissions heavy-duty technology into applications that are well suited to its use. According to CARB, “Promoting the development and use of advanced clean trucks will help CARB achieve its emission reduction strategies as outlined in the State Implementation Plan (SIP), Sustainable Freight Action Plan, SB 350, and AB 32.”²⁴

The percentage of zero-emissions truck sales is required to increase every year until 2035 when sales would need to be 55 percent of Classes 2b–3 (light/medium- and medium-duty trucks) truck sales, 75 percent of Classes 4–8 (medium- to heavy-duty trucks) straight truck sales, and 40 percent of truck tractor (heavy-duty trucks weighing 33,001 pounds or greater) sales. Additionally, large fleet operators (of 50 or more trucks) would be required to report information about shipments and services and their existing fleet operations.

Airborne Toxic Control Measure to Limit Diesel-Fueled Commercial Motor Vehicle Idling

In 2004, CARB adopted an Airborne Toxic Control Measure to Limit Diesel-Fueled Commercial Motor Vehicle Idling in order to reduce public exposure to diesel particulate matter emissions (Title 13 CCR Section 2485 and Title 17 CCR Section 93115). The measure applies to diesel-fueled commercial vehicles with gross vehicle weight ratings greater than 10,000 pounds that are licensed to operate on highways, regardless of where they are registered. This measure does not allow diesel-fueled commercial vehicles to idle for more than 5 minutes at any given location. While the goal of this measure is primarily to reduce public health impacts from diesel emissions,

²² CARB, 2002. Clean Car Standards – Pavley, Assembly Bill 1493, <https://www.arb.ca.gov/cc/ccms/ccms.htm>, last reviewed January 11, 2017, accessed June 2021.

²³ CARB, 2021a. Current Zero-Emissions Vehicle Regulation, <https://ww2.arb.ca.gov/our-work/programs/advanced-clean-cars-program/zev-program/current-zero-emission-vehicle-regulation>, accessed June 2021.

²⁴ CARB 2021b. Advanced Clean Trucks Program, <https://ww2.arb.ca.gov/our-work/programs/advanced-clean-trucks>, accessed June 2021.

compliance with the regulation also results in energy savings in the form of reduced fuel consumption from unnecessary idling.

Sustainable Communities Strategy

SB 375 (Chapter 728, Statutes of 2008), which establishes mechanisms for the development of regional targets for reducing passenger vehicle GHG, was adopted by the state on September 30, 2008. Under SB 375, CARB is required, in consultation with the state's metropolitan planning organizations, to set regional GHG reduction targets for the passenger vehicle and light-duty truck sector for 2020 and 2035. In February 2011, CARB adopted the GHG emissions reduction targets of 8 percent by 2020 and 13 percent by 2035 relative to 2005 GHG emissions for the Southern California Association of Governments (SCAG), which is the Metropolitan Planning Organization for the region in which the city is located.²⁵ Of note, the proposed reduction targets explicitly exclude emission reductions expected from the AB 1493 and the Low Carbon Fuel Standard regulations.

Under SB 375, the reduction target must be incorporated within each region's Regional Transportation Plan (RTP), which is used for long-term transportation planning, in a Sustainable Communities Strategy (SCS). Certain transportation planning and programming activities would then need to be consistent with the SCS; however, SB 375 expressly provides that the SCS does not regulate the use of land, and further provides that local land use plans and policies (e.g., general plans and zoning codes) are not required to be consistent with either the RTP or SCS. See detailed discussion of SCAG's latest RTP/SCS below.

Sustainable Freight Action Plan

Executive Order B-32-15 directed the state to establish targets to improve freight efficiency, transition to zero-emissions technologies, and increase the competitiveness of California's freight transport system, including warehouses and distribution centers. The targets are not mandates, but rather aspirational measures of progress towards sustainability for the state to meet and try to exceed. The targets include:

1. System Efficiency Target: Improve freight system efficiency by 25 percent by increasing the value of goods and services produced from the freight sector, relative to the amount of carbon that it produces by 2030.
2. Transition to Zero-Emissions Technology Target: Deploy over 100,000 freight vehicles and equipment capable of zero-emissions operation and maximize near-zero-emissions freight vehicles and equipment powered by renewable energy by 2030.
3. Increased Competitiveness and Economic Growth Targets: Establish a target or targets for increased state competitiveness and future economic growth within the freight and goods movement industry based on a suite of common-sense economic competitiveness and growth metrics and models developed by a working group comprised of economists, experts, and industry. These targets and tools will support flexibility, efficiency, investment, and best business practices through state policies and programs that create a positive environment for growing freight volumes and jobs, while working with industry to mitigate potential negative

²⁵ SCAG, 2021a. Greenhouse Gases, <http://www.scag.ca.gov/programs/Pages/GreenhouseGases.aspx>, accessed June 2021.

economic impacts. The targets and tools will also help evaluate the strategies proposed under the Action Plan to ensure consideration of the impacts of actions on economic growth and competitiveness throughout the development and implementation process.

California Environmental Quality Act

In accordance with CEQA and CEQA Guidelines Appendix F, Energy Conservation, and to assure that energy implications are considered in project analysis and decisions, EIRs are required to include a discussion of the potential significant energy impacts of proposed projects, with particular emphasis on avoiding or reducing inefficient, wasteful, and unnecessary consumption of energy. CEQA Guidelines Appendix F provides a list of energy-related topics that should be analyzed in an EIR. In addition, while not described or required as significance thresholds for determining the significance of impacts related to energy, Appendix F provides the following topics for consideration in the discussion of energy use in an EIR, to the extent the topics are applicable or relevant to the Project:

- “The project’s energy requirements and its energy use efficiencies by amount and fuel type for each stage of the project including construction, operation, maintenance, and/or removal. If appropriate, the energy intensiveness of materials may be discussed;
- The effects of the project on local and regional energy supplies and on requirements for additional capacity;
- The effects of the project on peak and base period demands for electricity and other forms of energy;
- The degree to which the project complies with existing energy standards;
- The effects of the project on energy resources; and
- The project’s projected transportation energy use requirements and its overall use of efficient transportation alternatives.”²⁶

Regional

Southern California Association of Governments

The city is located within the planning jurisdiction of SCAG. Pursuant to SB 375, SCAG prepared its first-ever SCS that was included in the 2012–2035 RTP/SCS, which was adopted by SCAG in April 2012. The goals and policies of that SCS demonstrated a reduction in per capita VMT (and a corresponding decrease in per capita transportation-related fuel consumption) and focused on transportation and land use planning strategies that included encouraging infill projects, locating residents closer to where they work and play, and designing communities with access to high quality transit services. In April 2016, SCAG adopted the 2016–2040 RTP/SCS, which furthered the goals of the 2012–2035 RTP/SCS.

On September 3, 2020, the SCAG’s Regional Council formally adopted the *2020–2045 Regional Transportation Plan/Sustainable Communities Strategy (2020–2045 RTP/SCS)* also known as “Connect SoCal”, which is an update to the previous 2012–2035 RTP/SCS and 2016–2040

²⁶ 2021 CEQA California Environmental Quality Act Statutes and Guidelines Appendix F: Energy Conservation.

RTP/SCS.²⁷ The 2020–2045 RTP/SCS describes how the region can attain the GHG emission-reduction targets set by CARB by achieving an 8 percent reduction in per capita transportation GHG emissions by 2020 and 19 percent reduction in per capita transportation GHG emissions by 2035 compared to the 2005 level on a per capita basis.²⁸ Compliance with and implementation of the 2020–2045 RTP/SCS policies and strategies would have co-benefits of reducing per capita criteria air pollutant emissions (e.g., nitrogen dioxide, carbon monoxide, etc.) associated with reduced per capita VMT. Compliance with and implementation of the 2020–2045 RTP/SCS policies and strategies would have the co-benefits of reducing per capita VMT and corresponding decreases in per capita transportation-related fuel consumption. Information regarding the applicable RTP/SCS for the region in which this Project is located is provided below.

South Coast Air Quality Management District

As discussed in Section 3.2, *Air Quality*, of this Draft EIR, SCAQMD is responsible for air quality planning in the South Coast Air Basin (where the city is located) and developing rules and regulations to bring the Air Basin into attainment of the ambient air quality standards. As part of its efforts to reduce local air pollution, SCAQMD has promoted a number of programs to promoted energy conservation, low-carbon fuel technologies (natural gas vehicles; electric-hybrids, hydraulic-hybrids, and battery-electric vehicles), renewable energy, vehicle miles traveled (VMT) reduction programs, and market incentive programs.

Local

Climate Action Plan

In 2017, the City of Carson adopted a Climate Action Plan (CAP) developed through the South Bay Cities Council of Governments (SBCCOG) that identifies community-wide strategies to lower energy use and resultant GHG emissions. Energy reductions within the CAP are from transportation, land use, energy generation and consumption, water consumption and waste generation. The following Climate Action Plan goals, policies, are relevant to energy with respect to the proposed General Plan update:

Goal LUT: A—Accelerate the Market for EV Vehicles

Measure LUT: A3—EV Charging Policies: EV charging policies incentivize EV adoption by making it easier to charge EVs.

Goal LUT: B—Encourage Ride-Sharing

Measure LUT: B1—Facilitate Private and Public Mobility Services: This strategy encourages public and private mobility services. It includes supporting private vendors in search of funds and not adopting positions that limit or exclude vendors. The measure considers service inter-operability as well as optimizing the customer experience for local residents.

²⁷ SCAG, 2021b. *2020–2045 Regional Transportation Plan/Sustainable Communities Strategy (2020–2045 RTP/SCS)*, October 2021.

²⁸ SCAG, 2021b. *2020–2045 RTP/SCS*, October 2021.

Goal LUT: C—Encourage Transit Usage

Measure LUT: C1—Expand Transit Network: This strategy focuses on expanding the local transit network by adding or modifying existing transit service; additionally, it includes transit strategies that address first/last mile connections which can encourage more people to travel via transit.

Goal LUT: D—Adopt Active Transportation Initiatives

Measure LUT: D2—Improve Design Development: This measure provides improved design elements to enhance slow speed multi-modalism such as walking and bicycling. This strategy may complement the concepts found in the Sustainable South Bay Strategies to increase connectivity within new or proposed developments and improves street network characteristics within a neighborhood. These concepts could include slow speed multi-modal networks.

Goal LUT: F—Organizational Strategies

Measure LUT: F1—Encourage Telecommuting and Alternative Schedules: Alternative work schedules take the form of staggered starting times, flexible schedules, or compressed work weeks. Alternative workplace programs are: 1) working at home-offices which eliminate a work trip entirely or 2) working at an office closer to the home which reduces part of the work trip. Cities can offer workplace programs at neighborhood centers, available space in government offices, public shared-work facilities, or commercial executive suites.

Measure LUT: F2—Implement Commute Trip Reduction Programs: This measure establishes a Commute Trip Reduction Ordinance.

Goal LUT: G—Land Use Strategies

Measure LUT: G1—Increase Density: These strategies seek to increase destination accessibility by encouraging combined uses such as office, commercial, institutional, and residential within areas and developments.

Measure LUT: G2—Increase Diversity: These strategies encourage projects to mix uses such as office, commercial, institutional, and residential within the same development.

Measure LUT: G3—Increase Transit Accessibility: Transit accessibility strategies involve measures that encourage transit services through general plans, zoning codes, and ordinances as well as filling in gaps within the transit network.

Goal EE: B—Increase Energy Efficiency in New Residential Developments

Measure EE: B1—As part of the 2010 California Green Building Standards (CALGreen), a two-tiered system was designed to allow local jurisdictions to adopt codes that go beyond state standards. The two tiers contain measures that are more stringent and achieve an increased reduction in energy usage by 15 percent (Tier 1) or 30 percent (Tier 2) beyond Title 24. It is also important that Title 24 Standards are updated so that the full GHG reduction benefit of the title can be realized. City staff that are well-informed can implement updates quickly and effectively.

Goal EE: D—Increase Energy Efficiency in New Commercial Developments

Measure EE: D1—Encourage or Require EE Standards Exceeding Title 24: This measure will develop City staff to be resources in encouraging and implementing energy efficiency beyond that are required by current Title 24 Standards for commercial development. In addition, this measure helps ensure that Title 24 Standards are updated.

Goal EE: E—Increase Energy Efficiency Through Water Efficiency

Measure EE: E1—Promote or Require Water Efficiency through SB X7-7: The Water Conservation Act of 2009 (SB X7-7), requires all water suppliers to increase water use efficiency. The legislation set an overall goal of reducing per capita urban water consumption by 20 percent from a baseline level by 2020. The goal of Water Conservation Act can be met by taking a variety of actions, including targeted public outreach and promoting water efficiency measures such as low-irrigation landscaping. Additional water conservation information, resource materials, education, and incentives are available through the West Basin Water District (WBMWD).

Goal EE: F—Decrease Energy Demand through Reducing Urban Heat Island Effect.

Measure EE: F1—Promote Tree Planting for Shading and Energy Efficiency: Trees and plants naturally help cool an environment by providing shade and evapotranspiration (the movement of water from the soil and plants to the air), making vegetation a simple and effective way to reduce urban heat islands. Urban heat islands are urban areas that are significantly warmer than their surrounding rural areas due to human activities. Shaded surfaces may be 20–45°F cooler than the peak temperatures of un-shaded materials. In addition, evapotranspiration, alone or in combination with shading, can help reduce peak summer temperatures by 2–9°F. Furthermore, trees and plants that directly shade buildings can reduce energy use by decreasing demand for air conditioning.

Measure EE: F2—Incentivize or Require Light-Reflecting Surfaces: Replacing surface areas with light-reflecting materials can decrease heat absorption and lower outside air temperature. Both roofs and pavements are ideal surfaces for taking advantage of this advanced technology.

Goal SW: C—Increase Diversion and Reduction of Overall Community Waste

Measure SW: C1—Set a Community Goal to Divert Waste from Landfills: Setting a goal to divert a specified percentage of waste will show the City’s commitment to reducing the GHG gases emitted from the landfill.

Goal UG: A—Increase and Maintain Urban Greening in the Community

Measure UG: A2—Increase Rooftop Gardens: Supporting the community in creating rooftop gardens will reduce the underlying building’s temperature by shading and evapotranspiration, resulting in a decrease of energy used for cooling the building and reduction of GHG emissions. The gardens can also sequester CO₂ emissions from the atmosphere, reduce storm water runoff, and improve air quality by reducing temperatures and capturing air pollutants.

Measure UG: A3—Support Local Farms: Local farmers markets reduce GHG emissions by providing the community with a more local source of food, potentially resulting in a reduction in the number of trips and vehicle miles traveled by both the food delivery

service and the consumers traveling to grocery stores. If the food sold at the local farmers' market is produced organically, it can also contribute to GHG reductions by displacing carbon-intensive food production practices.

Goal EGS: A—Support Energy Generation and Storage in the Community

Measure EGS: A2—Siting and Permitting: To accelerate the implementation of renewable energy technologies, regulatory barriers, need to be addressed to help ensure smooth deployment. Streamlining the siting and permitting process and reducing administrative burden to developers will help speed up the process of bringing these projects to reality.

Energy Efficiency Climate Action Plan

The City of Carson has adopted an Energy Efficiency Climate Action Plan (EECAP) developed through the SBCCOG that identifies community-wide strategies to lower energy use and resultant GHG emissions. Energy reductions within the CAP are from transportation, land use, energy generation and consumption, water consumption and waste generation. The following CAP goals, policies, are relevant to energy with respect to the proposed General Plan update:

Goal 2—Increase Energy Efficiency in New Residential Developments

Measure 2.1—Encourage or Require EE Standards Exceeding Title 24

Goal 4—Increase Energy Efficiency in New Commercial Development

Measure 4.1—Encourage or Require EE Standards Exceeding Title 24

Goal 5—Increase Energy Efficiency through Water Efficiency

Measure 5.1—Promote or Require water efficiency through SBX7-7

Measure 5.2—Promote water efficiency standards exceeding SBX7-7

Goal 6—Decrease Energy Demand through Reducing Urban Heat Island Effect.

Measure 6.1—Promote Tree Planting for Shading and Energy Efficiency

Measure 6.2—Incentivize or Require Light-Reflecting Surfaces

City of Carson Municipal Code

The City has adopted by reference, Title 31, Green Building Standards Code, of the Los Angeles County Code, as amended and in effect on January 1, 2020, which adopts the California Green Building Standards Code, 2019 Edition (CCR, Title 24, Part 11) and is known and may be cited as the Green Building Code of the City of Carson. The provisions of the Building Code, Existing Building Code, Residential Code, and Green Building Code applying to dwellings, lodging houses, congregate residences, motels, apartment houses, or other uses classified by the Building Code as a Group R Occupancy. The Green Building Code increases energy and water efficiency and reduces waste generation. The Green Building Code has co-benefits of reducing criteria

pollutant emissions through the increase in energy efficiencies, which reduces building energy demand and the combustion of natural gas within buildings.

3.5.4 Project Impact Analysis

Thresholds of Significance and Methodology

Thresholds of Significance

Appendix G of the State CEQA Guidelines provides screening questions that address potential impacts related to a number of environmental issues. The CEQA guidelines provides that lead agencies may use the questions set forth in the Appendix G to assess the significance of a project's environmental effects, and the use of Appendix G as a significance threshold is routinely sanctioned by the courts (although such use is not mandatory). Based on the Appendix G question regarding energy, a project would have a significant impact if the project would:

Threshold ENG-1: Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation; or

Threshold ENG-2: Conflict with or obstruct a state or local plan for renewable energy or energy efficiency.

Methodology

Construction

Construction of new development that could occur from adoption of the proposed General Plan update would have the potential to increase energy consumption through the use of heavy-duty construction equipment, such as excavators, cranes, and forklifts, and through vehicle trips generated from workers and haul trucks traveling to and from project sites.

The Project is a planning-level document, and, as such, there are no specific projects, project construction dates, or specific construction plans identified. Therefore, quantification of energy consumption associated with buildout cannot be specifically determined at this time. Therefore, the analysis will be based on the potential for construction energy consumption to exceed threshold values in the context of development intensity and compliance with regulatory standards.

Operation

Operation of new development that could occur from adoption of the proposed General Plan update would require energy in the form of electricity and natural gas for building heating, cooling, cooking, lighting, water demand and wastewater treatment, consumer electronics, and other energy needs, and transportation-fuels, primarily gasoline, for vehicles traveling to, from, and within the city.

Electricity

The estimated electricity demand that would occur from new development that could occur from adoption of the proposed General Plan update is analyzed relative to SCE's existing energy

supplies available to serve the city. Annual consumption of electricity (including electricity usage associated with the supply and conveyance of water) from operations was calculated using demand factors provided in CalEEMod based on the 2019 Title 24 standards, which went into effect on January 1, 2020. While the Title 24 standards are typically revised every three years with more stringent energy efficiency requirements, it is not known to what extent future revisions to the Title 24 standards would reduce energy demand from new buildings. Therefore, it is not possible to accurately quantify the effects of future revisions to the Title 24 standards on energy demand from new buildings. Energy usage from water demand (e.g., electricity used to supply, convey, treat, and distribute) are estimated based on the new development that could occur from adoption of the proposed General Plan update. The assessment also includes a discussion of the proposed General Plan update's compliance with relevant energy-related regulatory measures, that would minimize the amount of energy usage from new development under the General Plan update. These measures are also discussed in Section 3.2, *Air Quality*, and Section 3.7, *Greenhouse Gas Emissions*, of this Draft EIR.

Natural Gas

The estimated natural gas demand that would occur from new development that could occur from adoption of the proposed General Plan update is analyzed relative to SoCalGas' existing and planned energy supplies in 2040 (i.e., the buildout year). Natural gas demand from new development under the proposed General Plan update would be generated primarily by building heating and appliances. Natural gas consumption is compared to both supply and infrastructure availability.

Transportation Fuels

Energy for transportation from visitors and residents traveling to and from new development that could occur from adoption of the proposed General Plan update is estimated based on transportation fuel consumption factors from EMFAC along with VMT data, which takes into account mode and trip lengths, developed for the transportation analysis. Fuel consumption from motor vehicles are dependent on vehicle type. Thus, the factors were calculated using a representative motor vehicle fleet mix based on the CARB EMFAC2021 model and default fuel types. EMFAC2021 incorporates the SAFE Vehicles Rule as well as the Advanced Clean Truck Program. However, traffic reduction policies within the General Plan Circulation element, to which the regional travel demand model may not be fully sensitive (such as connectivity in neighborhoods, presence of bicycle and pedestrian facilities, and transportation demand management measures), may not be fully reflected in the VMT and transportation fuel consumption estimates. Therefore, estimated mobile source transportation fuel consumption are conservatively higher. Refer to VMT data in Appendix F of this EIR and energy calculations in Appendix C of this EIR. Transportation fuel consumption is compared to both supply and infrastructure availability.

Project Impact Analysis

Result in Wasteful, Inefficient, or Unnecessary Consumption of Energy Resources

Threshold ENG-1: The Project would have a significant impact if future development allowed by Carson2040 would result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation.

Impact ENG-1: *The Project would not result in a potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation. (Less than Significant)*

Construction

During construction of new development that could occur from adoption of the proposed General Plan update, energy would be consumed in the form of electricity on a limited basis for powering lights, electronic equipment, or other construction activities necessitating electrical power. Construction would also consume energy in the form of petroleum-based fuels associated with the use of off-road construction vehicles and equipment, construction workers travel to and from development sites, and delivery and haul truck trips (e.g., hauling of demolition material to off-site reuse and disposal facilities).

Electricity

Construction electricity would be consumed, on a limited basis, to power lighting, electric equipment, and supply and convey water for dust control. During construction of new development, the electricity demand at any given time would vary throughout the construction period based on the construction activities being performed, and would cease upon completion of construction. Electricity use from construction would be short-term, limited to working hours, used for necessary construction-related activities. When not in use, electric equipment would be powered off so as to avoid unnecessary energy consumption. Furthermore, the electricity used for off-road light construction equipment would have the co-benefit of reducing construction-related energy use from more traditional construction-related energy such as diesel fuel. Therefore, the impact from construction electrical demand would be less than significant and would not result in the wasteful, inefficient, and unnecessary consumption of energy.

Natural Gas

Construction activities, including the construction of new buildings and facilities, typically do not involve the consumption of natural gas. Accordingly, natural gas would generally not be supplied to support construction activities; thus, there would be no expected demand generated by future construction under the proposed General Plan update. If natural gas is used during construction, it would be in limited amounts and on a temporary basis and would specifically be used to replace or offset diesel-fueled equipment and as such would not result in substantial on-going demand. Therefore, the impact from construction natural gas demand would be less than significant and would not result in the wasteful, inefficient, and unnecessary consumption of energy.

Transportation Energy

Transportation fuels (gasoline and diesel) are produced from crude oil, which can be domestic or imported from various regions around the world. Based on current proven reserves, crude oil production would be sufficient to meet over 50 years of worldwide consumption.²⁹

Construction of new development that could occur from adoption of the proposed General Plan update would utilize fuel-efficient equipment consistent with state and federal regulations, such as the fuel efficiency regulations in accordance with the SAFE Vehicle Rule and Advanced Clean Truck Program, which would result in more efficient use of transportation fuels (lower consumption). Construction equipment and vehicles would also be required to comply with anti-idling regulations in accordance with Section 2485 in Title 13 of the CCR, and fuel requirements in accordance with Section 93115 in Title 17 of the CCR. As such, construction of new development would comply with regulatory measures to reduce the inefficient, wasteful, and unnecessary consumption of energy, such as petroleum-based transportation fuels. While some of these regulations are intended to reduce construction emissions, compliance with the anti-idling and emissions regulations discussed above would also result in fuel savings from the use of more fuel-efficient engines.

Based on the analysis above, construction would utilize energy only for necessary on-site activities and to transport construction materials and demolition debris to, from, and within the city. As discussed above, idling restrictions and the use of cleaner, energy-efficient equipment and fuels would result in less fuel combustion and energy consumption, and thus minimize construction-related energy use. Therefore, construction of new development that could occur with the adoption of the proposed General Plan update would not result in the wasteful, inefficient, and unnecessary consumption of energy, and this impact would be less than significant.

Operation

During operation of existing development and new development that could occur from adoption of the proposed General Plan update, energy would be consumed for multiple purposes, including, but not limited to, heating, ventilation, and air conditioning; refrigeration; lighting; and the use of electronics, equipment, and appliances. Energy would also be consumed by existing development and new development under the proposed General Plan update during operations related to water usage, solid waste disposal, and vehicle trips. **Table 3.5-2, *Estimated Carson2040 Operational Energy Demand***, shows the net change in energy demand from electricity, natural gas, gasoline, and diesel.

²⁹ BP Global, 2018. Oil reserves, <https://www.bp.com/en/global/corporate/energy-economics/statistical-review-of-world-energy/oil.html>. Accessed May 27, 2020.

**TABLE 3.5-2
ESTIMATED CARSON2040 OPERATIONAL ENERGY DEMAND¹**

Energy Type	Annual Quantity^{2,3}
Electricity	
Existing Development plus Carson2040 New Development (2040)	
Building Energy	9,233 MWh
Water Conveyance and Treatment	1,909 MWh
Subtotal	11,143 MWh
Existing Development (2016)	8,623 MWh
Total Net Electricity	2,520 MWh
Natural Gas	
Existing Development plus Carson2040 New Development (2040)	
Building Energy	14,758,937 cf
Mobile Sources	44,812 cf
Subtotal	14,803,749 cf
Existing Development (2016)	12,113,861 cf
Total Net Natural Gas	2,689,888 cf
Transportation	
Existing Development plus Carson2040 New Development (2040)	
Gasoline	40,074,600 gallons
Diesel	4,615,602 gallons
Existing Development (2016)	
Gasoline	59,511,413 gallons
Diesel	5,047,480 gallons
Total Net Transportation – Gasoline	(19,436,813 gallons)
Total Net Transportation – Diesel	(431,878 gallons)

NOTES: MWh = megawatt-hours; cf = cubic feet

¹ Detailed calculations are provided in Appendix C of this Draft EIR.

² Totals may not add up due to rounding of decimals.

³ Parentheses denote a negative value

SOURCE: Prepared by Environmental Science Associates based on Appendix C.

Electricity

Operation of new development that could occur from adoption of the proposed General Plan update would result in demand for electricity resources including for water supply, conveyance, distribution, and treatment. The estimated operational electricity demand, including from water demand, is provided in Table 3.5-2. As shown in Table 3.5-2, the operation of existing development and new development under the proposed General Plan update would result in a net increase of electricity compared to existing conditions of approximately 2,520 MWh per year.

New development under the proposed General Plan update would comply with the applicable provisions of Title 24 and the CALGreen Code in effect at the time of building permit issuance. The values in Table 3.5-2 assume compliance with the 2019 Title 24 Building Energy Efficiency Standards for new development under the proposed General Plan update. Since the standards are updated every three years, future new development under the proposed General Plan update would be designed to include energy saving features to comply with future Title 24 standards and CALGreen Code requirements that are not reflected in the quantified values in Table 3.5-2, which may include greater use of energy and water efficient fixtures and fittings, energy efficient mechanical systems, light pollution reduction, site development best practices, sub metering, water efficient landscapes, recycling, and superior weather resistance and moisture management. Further, implementation of policies in the proposed General Plan update would reduce the electricity demand from new development in the city by promoting energy efficiency designs and strategies beyond regulatory requirements and policies for renewable energy. Therefore, operations would not result in the wasteful, inefficient, and unnecessary consumption of electricity.

For the 2020 fiscal year, SCE had an annual electric sale to customers of approximately 85,399,000 MWh.³⁰ The net increase in future electricity demand from existing development and new development that could occur from adoption of the proposed General Plan update would represent approximately 0.003 percent of the SCE network sales for 2020. Under peak conditions, the net increase of 2,520 MWh on an annual basis would generally be equivalent to a peak of 0.3 to 0.6 MW (assuming 8,760 hours or 4,380 hours per year of active electricity demand). In comparison to the SCE power grid base peak load of 23,881 MW for 2020, the net increase would represent approximately 0.001 to 0.002 percent of the SCE base peak load conditions. Thus, it is likely that the net increase in electricity would generally be served by existing infrastructure capacity and the impact related to electrical supply and infrastructure capacity would be less than significant.

Natural Gas

The new development that could occur from adoption of the proposed General Plan update would result in demand for natural gas resources, as shown in Table 3.5-2. As would be the case with electricity, the new development would comply with the applicable provisions of Title 24 and the CALGreen Code in effect at the time of building permit issuance to minimize natural gas demand. The values in Table 3.5-2 assume compliance with the 2019 Title 24 Building Energy Efficiency Standards for new development under the proposed General Plan update. Since the standards are updated every three years, future new development with adoption of the proposed General Plan update would be designed to include energy saving features to comply with future Title 24 standards and CALGreen Code requirements that are not reflected in the quantified values in Table 3.5-2, which could include improvements to water heating efficiency or reduced natural gas-fueled systems in buildings. Further, implementation of policies in the proposed General Plan update would reduce the demand for natural gas from new development in the city by promoting energy efficiency designs and strategies beyond regulatory requirements and

³⁰ SCE, 2021b. *2020 Annual Report*. Available at: <https://www.edison.com/content/dam/eix/documents/investors/sec-filings-financials/2020-eix-sce-annual-report.pdf>. Accessed September 2021.

policies for renewable energy. Therefore, operations would not result in the wasteful, inefficient, and unnecessary combustion of natural gas.

According to SoCalGas data, natural gas demand has been relatively stable over the past three years ranging from 2,342 million cubic feet (MMcf) per day or 854,830 MMcf total in 2018 to 2,435 MMcf per day or 888,775 MMcf total in 2020.³¹ Based on the estimated natural gas consumption as shown in Table 3.5-2, the net increase in future natural gas demand from existing development and new development that could occur from adoption of the proposed General Plan update would account for approximately 0.0003 percent of SoCalGas' 2020 sales. According to the 2020 California Gas Report, SoCalGas is forecasted to require 767,595 MMcf in the year 2035, the latest available projected year. The estimated increase in natural gas demand of 2,689,888 cf per year would account for approximately 0.0004 percent of SoCalGas' projected natural gas demand for the year 2035.³² Therefore, it is anticipated that SoCalGas' existing and planned natural gas supplies would be sufficient to support the demand for natural gas at full Carson2045 buildout conditions. Therefore, it is likely that the net increase in natural gas would generally be served by existing infrastructure capacity and the impact related to natural gas would be less than significant.

Transportation Energy

As discussed above, transportation fuels (gasoline and diesel) are produced from crude oil, which can be domestic or imported from various regions around the world, and based on current proven reserves, crude oil production would be sufficient to meet over 50 years of worldwide consumption.³³

The estimated operational transportation fuel demand from existing development and new development that could occur from adoption of the proposed General Plan update is provided in Table 3.5-2. As discussed previously, traffic reduction policies within the General Plan Circulation element may not be fully reflected in the VMT and transportation fuel consumption estimates. Therefore, estimated mobile source transportation fuel consumption are conservatively higher.

The location, design, and land uses of the growth anticipated with adoption of the proposed General Plan update would implement land use and transportation strategies related to reducing vehicle trips for residents and employees of the city by increasing commercial and residential density with over 95 percent of new residential development planned for multi-family dwelling units, which would allow for increased mixed-use density at infill locations and near public transit. As discussed in Section 3.15, *Transportation*, of this Draft EIR, several transit agencies provide local and regional transit service to the residents of Carson, including Metro, Long Beach

³¹ California Gas and Electric Utilities, 2020. California Gas Report. Available online at: https://www.socalgas.com/sites/default/files/2020-10/2020_California_Gas_Report_Joint_Utility_Biennial_Comprehensive_Filing.pdf. Accessed September 2021.

³² California Gas and Electric Utilities, 2020. California Gas Report. Available online at: https://www.socalgas.com/sites/default/files/2020-10/2020_California_Gas_Report_Joint_Utility_Biennial_Comprehensive_Filing.pdf. Accessed September 2021.

³³ BP Global, 2018. Oil reserves, <https://www.bp.com/en/global/corporate/energy-economics/statistical-review-of-world-energy/oil.html>. Accessed May 27, 2020.

Transit, Compton Renaissance Transit, Gardena Transit, and Torrance Transit (refer to Table 3.15-2, *Transit Service in Carson*, in Section 3.15, *Transportation*, of this Draft EIR).

The proposed General Plan update focuses on infill development and revitalization to help the city of Carson transition from a predominantly industrial and suburban community to a complete city with an integrated mix of housing, employment, educational, cultural, and recreational options balanced with industrial uses. These efforts are targeted in the Core and in centers around the Core, expanding on recent development along Carson Street. Development in the centers, along key corridors, and large opportunity sites such as the Shell property on East Del Amo Boulevard and South Wilmington Avenue are envisioned to be connected by community-oriented Boulevards that feature public gathering spaces and pedestrian- and bicycle-oriented designs. New land use designations that introduce greater flexibility through emphasis on mixed uses instead of single uses are proposed to facilitate development to achieve this vision and respond to the need to accommodate the city's growing and diverse population. The focus on infill development and land use designations for mixed uses would support land use and transportation strategies by providing for greater density near transit. Higher densities, especially in mixed-use designations, increase capacity for residential development near community-serving commercial, retail, and office uses as well as schools, parks, and recreational facilities, and proposed improvements to the bicycle, pedestrian, and road networks will make it easier for residents to travel throughout the community. Therefore, adoption of the proposed General Plan update would support statewide and regional efforts to improve transportation energy efficiency and reduce transportation energy consumption.

As the Project would support statewide and regional efforts to improve transportation energy efficiency, and as discussed in further detail below, adoption of the proposed General Plan update would not conflict with the 2020–2045 RTP/SCS goals and benefits intended to improve mobility and access to diverse destinations, provide better “placemaking,” provide more transportation choices, and reduce vehicular demand and associated emissions. Therefore, adoption of the proposed General Plan update would not conflict with the actions and strategies contained in the 2020 RTP/SCS. In fact, as discussed above, the general location of new development that would occur under the proposed General Plan update would not conflict with the recommendations in these documents and would support their goals.

In addition, with the adoption of the proposed General Plan update, municipal solid waste would continue to be diverted to City-certified construction and demolition waste processors using City-certified waste haulers, which include El Sobrante Landfill and H.M Holloway Inc. Landfill. Diversion of solid waste would reduce truck trips to landfills, which are typically located some distance away from city centers, and would increase the amount of waste recovered (e.g., recycled, reused, etc.) at material recovery facilities, thereby further reducing transportation fuel consumption. As discussed in Section 3.17, *Utilities and Service Systems*, of this Draft EIR, AB 341, adopted in 2012, requires that commercial enterprises that generate four cubic yards or more of solid waste and multi-family housing complexes of five units or more participate in recycling programs in order to meet California's goal to recycle 75 percent of its solid waste by 2020. SB 1383, adopted in 2016, establishes goals of 50 percent organics waste reduction by 2020 and 75 percent reduction by 2025. Development of future land uses, as projected in the proposed General

Plan update, would be required to comply with federal, state, and local statutes and regulations related to solid waste. Furthermore, the policies provided in the proposed General Plan update regarding solid waste disposal and associated public facilities would further ensure compliance with applicable regulations. Compliance with federal, state, and local waste management and reduction statutes and regulations related to solid waste would reduce waste-related transportation energy.

Based on the above, future new development with the adoption of the proposed General Plan update would minimize operational transportation fuel demand in line with state, regional, and County goals. Therefore, the Project would not lead to wasteful, inefficient, and unnecessary consumption of energy, and this impact would be less than significant.

Proposed General Plan Policies that Address the Impact

Land Use and Revitalization

Guiding Policies

- LUR-G-2 Balance employment and housing within the community to provide more opportunities for Carson residents to work locally, cut commute times, and improve air quality.
- LUR-G-4 Promote a diversity of complementary uses in different parts of the city, including mixed flexible office space, retail, dining, residential, hotels, and other compatible uses, to foster vibrant, safe, and walkable environments, with flexibility to accommodate emerging uses and building typologies.
- LUR-G-6 Encourage revitalization of corridors as pedestrian-oriented, mixed-use residential, retail, and office community spines, serving as focal points for neighborhood amenities and services, and helping foster neighborhood identity and vitality.
- LUR-G-7 Develop Carson’s central Core—extending approximately 1.7 miles both east-west along West Carson Street and north-south along Avalon Boulevard and including the South Bay Pavilion—into a vibrant, pedestrian-oriented mixed-use hub of the community, with housing, retail, and other commercial uses, and civic uses and community gathering spaces.
- LUR-G-9 Locate medium and high-density development along major corridors and major re-development sites in the central Core, to focus housing near regional access routes, transit stations, employment centers, shopping areas, and public services.
- LUR-G-11 Encourage mixed-use development (two or more uses within the same building or in close proximity on the same site), especially in the Core area, to promote synergies between uses.

Implementing Policies

- LUR-P-1 Where feasible, locate higher density residential uses in proximity to job centers and commercial centers in order to discourage long commute times and encourage pedestrian traffic and provide a consumer base for commercial uses.

- LUR-P-8 Promote development of neighborhood-scaled commercial centers in residential areas to serve the everyday needs of nearby residents.
- LUR-P-11 Promote ground level commercial uses to foster pedestrian activity and visual engagement and provide commercial uses to serve residents of surrounding neighborhoods. Where commercial uses are or were present as of 2021, at least half of the commercial area shall be retained or replaced as part of new development. Where more than 0.1 FAR ground level active commercial uses are provided (new or through replacement), the City may grant residential density increase up to 60 percent on a graduated scale as specified in the Zoning Ordinance and Table 2-2.
- LUR-P-12 Prohibit uses in the Core (as shown in Figure 2-3) that do not add to a strong pedestrian character, such as warehouses, gas stations, drive-through establishments, industrial, and other new development whose design prioritizes automobile access.
- LUR-P-13 Focus new residential, commercial and employment-generating land uses along Carson Street and Avalon Boulevard in order to support higher-frequency transit service. Provide adequate infrastructure, such as bus lanes or bus shelters at bus stops, to support transit service usage.
- LUR-P-16 Where larger parcels—such as the Shell site—are redeveloped, require development to implement urban design policies, including creation of smaller blocks (typically with no dimension larger than 300 to 600 feet dependent on use, with smaller blocks in residential areas) to create walkable, urban environments; buildings and landscapes that relate to the surroundings, with high-level of public-realm amenities, such as tree-lined streets; sidewalks, pedestrian paths, and crossings; and plazas and other gathering spaces for workers and visitors. Site planning for new construction should ensure that streets are lined with occupied buildings or landscapes, with parking and service facilities tucked behind or away from public streets.
- LUR-P-18 Promote infill mixed-use development in either a vertical or horizontal configuration when aging shopping centers are redeveloped to create mixed-use corridors with a range of housing types at mid-to-high densities along their lengths and activity nodes at key intersections with retail/commercial uses to serve the daily needs of local residents.
- This policy applies to areas that are designated as Corridor Mixed Use or Downtown Mixed Use, such as within the city's Core and Carson Plaza near the [California State University, Dominguez Hills] CSU-DH campus.*
- LUR-P-24 Promote the development of sites designated as Business Residential Mixed Use (BRMU) with a vibrant mix of business and residential uses that include:
- For the Shell site, require at least a minimum of 25 acres of open space, 18 of which as a centralized park or open space and seven acres along the western border of the property as a Greenway Corridor/buffer. Exact locations and acreages should be specified during project planning.
 - For the Shell site, require at least a minimum nine acres of General Commercial at the south-west corner of Del Amo Boulevard and

Wilmington Avenue or at a centralized location. Other commercial uses are encouraged throughout the site as mixed-use development.

- Encourage residential development with a range of housing types, and technology, research and development, and office uses if determined to be suitable from an environmental perspective.
- Require development to be connected to the surroundings, with through streets, and walkable urban design patterns. See additional policies in Chapter 4: Community Character, Identity, and Design Element.
- When housing is proposed adjacent to industrial uses, require the development of a cohesive master or specific plan to include surrounding property owners to ensure compatibility. The Shell site is required to have a similar plan to outline long-term growth of the site.

Circulation

Guiding Policies

- CIR-G-1 Provide a balanced transportation system of multimodal networks providing a broad range of travel options to make transportation convenient, comfortable, and safe for people of all abilities.
- CIR-G-2 Promote bicycling and walking, and support and improve connections to local and regional transit service.
- CIR-G-3 Manage the transportation network to minimize roadway congestion, while balancing traffic Level of Service (LOS) objectives with promoting reduction in vehicle miles traveled and considerations of community character and design.
- CIR-G-4 Encourage the development of a multimodal freight transportation system that balances the need for effective and efficient transportation of goods with the health and wellbeing of the community.

Implementing Policies

- CIR-P-1 Update the City's Bicycle Plan, identifying a citywide bicycle network of off-street bike paths, on-street bike lanes and bike streets. As part of the plan, consider bicycle lockers, secure bike parking, pavement condition, and access to transit, parks, and schools throughout the city. The update of the Bicycle Plan should strategically identify projects that will improve equity, the environment, reduce trips on the roadway system, and prioritize projects that align with primary local active transportation grant funding programs including Metro, SCAG, and Caltrans.
- CIR-P-2 Develop a First Last Mile Plan to improve walking and biking connections to future and existing transportation hubs.
- CIR-P-3 Establish bike hubs (centralized locations with convenient bike parking for trip destinations or transfer to other transportation modes), at key transit nodes or commercial nodes.
- CIR-P-4 Evaluate opportunities, such as new development or changes to the transit network, to enhance existing and proposed Class II bike lanes and Class III

- bike routes to protected bike lanes and bike routes to bike lanes or bike boulevards.
- CIR-P-16 Work with Long Beach Transit to serve local neighborhoods and connect residences with shopping, employment, transit, and recreational opportunities.
- CIR-P-17 Participate in and encourage collaboration among adjacent cities to provide a more reliable public transportation system the area.
- CIR-P-19 Work with regional transit services to develop an on-demand transportation system that caters to senior populations and people with disabilities.
- CIR-P-20 Evaluate and adjust transit routes to better connect disadvantaged communities with major transit hubs and key destinations such as parks, schools, and healthy food opportunities.
- CIR-P-21 Work with transit providers in the city to implement public transportation improvements and enhance first-last mile connections at highly utilized transit stops.
- CIR-P-22 Develop a transportation demand management (TDM) ordinance. A TDM ordinance would incorporate strategies appropriate for the local context and land use as different strategies are more effective at reducing employee commute trips, while others focus on reducing residential, shopping, or other discretionary trips. Strategies will generally focus on land use, parking, transit, and active transportation.
- CIR-P-23 Pursue the implementation of TDM strategies through application of the City’s Transportation Study Guidelines and compliance with Senate Bill 743 that seeks to reduce per capita VMT for residential, retail, and office trips.
- CIR-P-24 Encourage local public agencies and employers to implement TDM policies that promote VMT reductions. The research in this area is regularly evolving and can help identify viable and defensible VMT reduction strategies.
- CIR-P-25 Evaluate the potential for strategies that can reduce VMT such as citywide bike-sharing, promote car-sharing and other electrified modes as options to reduce traffic congestion.
- CIR-P-26 Prioritize and identify disadvantaged community locations to develop sustainable mobility hubs that include car-sharing, bike-sharing and public EV charging infrastructure to minimize traffic and air quality effects.
- CIR-P-27 Require all new and substantially renovated office, retail, industrial, and multi-family developments to provide EV charging infrastructure and EV ready parking.
- CIR-P-32 Enhance infrastructure to accommodate last mile delivery services for low carbon solutions, such as last mile bicycle delivery.
- CIR-P-33 Promote the deployment of near-zero and zero-emissions trucks for urban deliveries, port drayage trips, regional, and long-haul trips by providing charging infrastructure and plug-in technologies for extended idling.

CIR-P-34 Encourage deployment of alternative-fueled vehicles through advancement of new technologies, such as autonomous vehicles that are anticipated to be a pathway to electric vehicles.

Community Health and Environmental Justice

Guiding Policies

CHE-G-8 Improve bike, pedestrian, and transit connectivity to community facilities and services, especially in underserved areas.

Implementing Policies

CHE-P-5 Recognize and actively promote policies to create a multimodal transportation system that reduces solo driving.

Open Space and Environmental Element

Guiding Policies

OSEC-G-14 Promote sustainable energy generation practices to support energy security that is resilient to blackouts and other climate or anthropogenic disasters.

OSEC-G-15 Implement programs and work with jurisdictional partners to increase sustainable energy production and energy security.

OSEC-G-25 Demonstrate leadership by reducing the use of energy and fossil fuel consumption in municipal operations, including transportation, waste and water reduction, recycling, and by promoting efficient building design and use.

Implementing Policies

OSEC-P-29 Promote renewable energy generation and storage to decrease reliance on outside sources and minimize impacts from blackouts.

Potential strategies include:

- Incentivize solar panel deployment beyond state’s mandates and pursue state, regional, and federal funding programs designed to reduce energy demand through conservation and efficiency. Establish guidance on placement of solar panels to minimize impacts to aesthetic resources.
- Promote renewable energy generation on City-owned sites and deployment of micro-grids for energy independence and lifeline operations in the event of power shutdowns.
- Reduce reliance on backup generators that rely on fossil fuels by establishing citywide program to transition to more climate friendly options including battery storage, solar-powered generators, and small-scale wind turbines in appropriate areas.
- Promote alternative modes of electricity generation—such as wind, solar, biomass, geothermal, and hydroelectric—and invest in electric storage infrastructure at the city-wide level.
- Increase installation of electric vehicle charging stations with funding from state and federal sources.
- Convert street lighting, water pumping, water treatment, and other energy-intensive operations to more efficient technologies.

- OSEC-P-41 Encourage efficient, clean energy and fuel use through collaborative programs, award programs, and incentives, while also removing barriers to the expansion of alternative fuel facilities and infrastructure.
- OSEC-P-51 Use the CAP as the City’s primary strategy to reduce GHG emissions, including strategies related to land use and transportation, energy efficiency, solid waste, urban greening, and energy generation and storage.
- OSEC-P-57 Facilitate energy efficiency in building regulations, providing flexibility to achieve specified energy performance levels and requiring energy efficiency measures as appropriate.
- OSEC-P-58 Support sustainability measures to reduce and conserve municipal and private energy uses, especially from commercial and industrial uses which consume 78 percent of the city’s total electric usage.
- OSEC-P-59 Coordinate with the business and industrial community to encourage energy efficiency in the city’s largest energy users while supporting economic growth objectives.

Mitigation Measures

None required.

Conflict with State or Local Renewable Energy Plan

Threshold ENG-2: The Project would have a significant impact if future development allowed by Carson2040 would conflict with or obstruct a state or local plan for renewable energy or energy efficiency.

Impact ENG-2: *The Project would not conflict with or obstruct a state or local plan for renewable energy or energy efficiency. (Less than Significant)*

Construction

The construction of new development that could occur from adoption of the proposed General Plan update would utilize construction contractors who must demonstrate compliance with applicable regulations. Construction equipment would be required to comply with federal, state, and regional requirements where applicable. With respect to truck fleet operators, the EPA and NHSTA have adopted fuel-efficiency standards for medium- and heavy-duty trucks that will be phased in over time. Phase 1 heavy-duty truck standards apply to combination tractors, heavy-duty pickup trucks and vans, and vocational vehicles for model years 2014 through 2018 and result in a reduction in fuel consumption from 6 to 23 percent over the 2010 baseline, depending on the vehicle type.³⁴ The EPA and NHTSA also adopted the Phase 2 heavy-duty truck standards, which cover model years 2021 through 2027 and require the phase-in of a 5 to 25 percent reduction in fuel consumption over the 2017 baseline depending on the compliance year and

³⁴ EPA, 2021. *Fact Sheet: EPA and NHTSA Adopt First-Ever Program to Reduce Greenhouse Gas Emissions and Improve Fuel Efficiency of Medium- and Heavy-Duty Vehicles*, August 2011.

vehicle type.³⁵ These regulations would have an overall beneficial effect on reducing fuel consumption from trucks over time as older trucks are replaced with newer models that meet the standards.

In addition, construction equipment and trucks are required to comply with CARB regulations regarding heavy-duty truck idling limits of five minutes per occurrence and location. Additionally, CARB regulations regarding in-use off-road equipment require older, less efficient equipment to be replaced or repowered with newer, more efficient models or engines. These regulations would result in an increase in energy savings in the form of reduced fuel consumption from more fuel-efficient engines. Although these requirements are intended to reduce criteria pollutant emissions, compliance with the anti-idling and emissions regulations would also result in the efficient use of construction-related energy. Thus, based on the information above, construction of new development under the proposed General Plan update would comply with existing energy standards and the impact would be less than significant.

Operations

The operation of new development that could occur from adoption of the proposed General Plan update would be designed in a manner that is consistent with relevant energy conservation plans designed to encourage development that results in the efficient use of energy resources. New development would comply with Title 24 requirements and CALGreen to reduce energy consumption by implementing energy efficient building designs, pre-wiring residences with electric vehicle charging ports, implementing solar-ready rooftops, reducing indoor and outdoor water demand, and installing energy-efficient appliances and equipment.

The City of Carson CAP identifies community-wide strategies to lower energy use. Energy reductions within the CAP are from transportation, land use, energy generation and consumption, water consumption and waste generation. The proposed General Plan update incorporates the CAP goals and policies for energy efficiency and renewable energy, including electric vehicle charging, which would source transportation energy from renewable sources in accordance with the Renewables Portfolio Standard. Thus, new development under the proposed General Plan update would incorporate Climate Action Plan goals and policies as part of future development approvals and would not result in conflicts with the plan.

Through the City's EECAP, the City of Carson has established goals and strategies that would reduce energy use. The EECAP focuses on increasing energy efficiency and reducing GHG emissions from energy to meet attainment goals. In addition to EECAP energy efficiency goals, utility providers (such as SCE) are required to provide 50 percent of their electricity supply from renewable sources by the year 2030, further reducing the GHG intensity of supplied electricity. New development under the proposed General Plan update would comply with CALGreen energy efficiency requirements, which would be consistent with EECAP goals for increasing energy and water use efficiency in new residential and commercial developments.

³⁵ EPA, 2016. Vol. 81, No. 206, Greenhouse Gas Emissions and Fuel-Efficiency Standards for Medium- and Heavy-Duty Engines and Vehicles—Phase 2, Tuesday, October 25, 2016.

With respect to operational transportation-related fuel usage, future development under the proposed General Plan update would support statewide efforts to improve transportation energy efficiency and reduce transportation energy consumption with respect to private automobiles. Vehicles associated with new development would be required to comply with CAFE fuel economy standards, which are designed to result in more efficient use of transportation fuels. Furthermore, adoption of the proposed General Plan update would not conflict with the 2020–2045 RTP/SCS goals and benefits intended to improve mobility and access to diverse destinations, provide better “placemaking,” provide more transportation choices, and reduce vehicular demand and associated emissions. The 2020–2045 RTP/SCS includes land use and transportation strategies that are intended to reduce VMT and resulting fuel consumption. The applicable land use strategies include planning for growth around livable corridors; providing more options for short trips/neighborhood mobility areas; supporting zero emission vehicles and expanding vehicle charging stations; and supporting local sustainability planning. The applicable transportation strategies include managing through a Transportation Demand Management (TDM) Program and Transportation System Management (TSM) Plan, including advanced ramp metering, and expansion and integration of the traffic synchronization network; and promoting active transportation. The majority of the transportation strategies are to be implemented by cities, counties, and other regional agencies such as SCAG and SCAQMD, although some can be furthered by individual development projects.

As discussed in Section 3.15, *Transportation*, of this Draft EIR, policies in the Circulation Element would include policies in-line with the 2020–2045 RTP/SCS such as encouraging local government and employers to implement TDM policies that promote VMT reductions, promoting bike-sharing, car-sharing and other electrified modes as options to reduce traffic congestion, and focusing truck traffic onto appropriate arterial corridors in the city. Further, the location, design, and land uses from growth anticipated by the Project would implement land use and transportation strategies related to reducing vehicle trips for residents and employees of the city by increasing commercial and residential density with over 95 percent of new residential development planned for multi-family dwelling units, which would allow for increased mixed-use density at infill locations and near public transit. Several transit agencies provide local and regional transit service to the residents of Carson, including Metro, Long Beach Transit, Compton Renaissance Transit, Gardena Transit, and Torrance Transit. Several routes in Carson provide access to the Metro A (Blue) Line, which passes through the eastern edge of Carson without stops. The Harbor Gateway Transit Center is located just west of the city, adjacent to I-110. This transit center is a stop on the Metro Silver Line, which provides critical regional access to downtown Los Angeles and east to the El Monte Station. Connection to the Transit Center is provided by Metro Lines 52 and 246. Both Long Beach Transit and Torrance Transit provide access to Long Beach, including the Long Beach Transit Gallery, located at the downtown Long Beach A Line station. Torrance Transit also provides access to the South Bay, including to the South Bay Galleria Transit Center and the Redondo Beach Pier. Refer to Table 3.15-2, *Transit Service in Carson*, in Section 3.15, *Transportation*, of this Draft EIR, for a summary of transit service in the city of Carson.

The proposed General Plan update focuses on infill development and revitalization to help the city of Carson transition from a predominantly industrial and suburban community to a complete city with an integrated mix of housing, employment, educational, cultural, and recreational options balanced with industrial uses. These efforts are targeted in the Core and in centers around the Core, expanding on recent development along Carson Street. Development in the centers, along key corridors, and large opportunity sites such as the Shell property on East Del Amo Boulevard and South Wilmington Avenue are envisioned to be connected by community-oriented Boulevards that feature public gathering spaces and pedestrian- and bicycle-oriented designs. New land use designations that introduce greater flexibility through emphasis on mixed uses instead of single uses are proposed to facilitate development to achieve this vision and respond to the need to accommodate the city's growing and diverse population.

The proposed General Plan update outlines strategies for greater integration of uses in different parts of the city and a better connection between employment and residential uses, with more areas designated for mixed-use development. It recognizes the physical elements that help define the character of Carson, including existing residential neighborhoods, downtown Core, industrial/business centers, and corridors. This structure helps establish a clear multi-modal network throughout the city by focusing on both community destinations as well as the efficiency, safety, and convenience of the modes of transportation in between. Higher densities, especially in mixed-use designations, increase capacity for residential development near community-serving commercial, retail, and office uses as well as schools, parks, and recreational facilities, and proposed improvements to the bicycle, pedestrian, and road networks will make it easier for residents to travel throughout the community. Therefore, the Project would not conflict with RTP/SCS land use and transportation strategies that are intended to reduce VMT and resulting fuel consumption.

Based on the information above, operation of new development under the proposed General Plan update would comply with plans for energy efficiency and renewable energy and this impact would be less than significant.

Proposed General Plan Policies that Address the Impact

Guiding Policies LUR-G-2, LUR-G-4, LUR-G-6, LUR-G-7, LUR-G-9, LUR-G-11, CIR-G-1, CIR-G-2, CIR-G-3, CIR-G-4, CHE-G-8, OSEC-G-14, OSEC-G-15, and OSEC-G-25, and Implementing Policies LUR-P-1, LUR-P-8, LUR-P-11, LUR-P-12, LUR-P-13, LUR-P-16, LUR-P-18, LUR-P-24, CIR-P-1, CIR-P-2, CIR-P-3, CIR-P-4, CIR-P-16, CIR-P-17, CIR-P-19, CIR-P-20, CIR-P-21, CIR-P-22, CIR-P-23, CIR-P-24, CIR-P-25, CIR-P-26, CIR-P-27, CIR-P-32, CIR-P-33, CIR-P-34, CHE-P-5, OSEC-P-29, OSEC-P-41, OSEC-P-51, OSEC-P-57, OSEC-P-58, and OSEC-P-59, as discussed under Impact ENG-1.

Mitigation Measures

None required.

3.5.5 Cumulative Impact Analysis

Future development and population growth associated with the Project would result in the increased use of electricity and natural gas resources and associated infrastructure. SCE, the electricity service provider for the Planning Area, has determined that the use of such resources would be minor compared to existing supply and infrastructure within the SCE service area and would be consistent with growth expectations. Similarly, the use of natural gas resources would be on a relatively small scale and would be consistent with the growth expectations for the Planning Area's natural gas service provider, SoCal Gas. Development projects anticipated by the Project would be required to incorporate energy conservation features in order to comply with applicable mandatory regulations including CALGreen Code and state energy standards under Title 24. Therefore, the impact with respect to electricity and natural gas consumption from new development under the Project would be less than cumulatively considerable.

While growth within the Planning Area and region is anticipated to increase the demand for transportation and total VMT, development projects anticipated by the Project would be required to demonstrate consistency with federal and state fuel efficiency goals and incorporate mitigation measures as required under CEQA. Siting land use development projects at infill sites is consistent with the state's overall goals to reduce VMT pursuant to SB 375, and VMT per capita would decrease compared to existing conditions. Therefore, the impact of development anticipated by the Project would be less than cumulatively considerable with respect to transportation energy.

All development projects anticipated by the Project would be required to comply with CALGreen and Title 24 energy efficiency requirements and other regulations, which would reduce energy consumption by promoting energy efficiency and the use of renewable energy. The Project would include policies designed to reduce VMT (including traffic calming measures and expansion of pedestrian and bicycle infrastructure) and prioritizes mixed-use and infill developments that would support development of compact communities in existing urban areas and reuse developed land served by high quality transit. Therefore, the Project would be consistent with the guidance provided in the SCAG RTP/SCS. Proposed General Plan policies and mitigation would further reduce emissions associated with new development through increased energy efficiency, renewable energy generation, improved transit, and reduced consumption and waste. Therefore, the impact on the implementation of a state or local plan for renewable energy or energy efficiency would be less than cumulatively considerable.

3.6 Geology and Soils

3.6.1 Introduction

This section provides an analysis of potential geologic, soils, and seismic impacts, including fault rupture, ground shaking, liquefaction, dynamic dry settlement, expansive soils, and landform/landslide, associated with future development allowed under the Project. This section also describes existing soils and geologic conditions, including geologic and seismic hazards in the Planning Area and applicable regulatory framework regarding geology, soils, and seismicity. Finally, this section evaluates potential impacts to paleontological resources and unique geologic features associated with the Project.

No comments received in response to the Notice of Preparation (NOP) and Recirculated NOP regarding geology and soils.

3.6.2 Environmental Setting

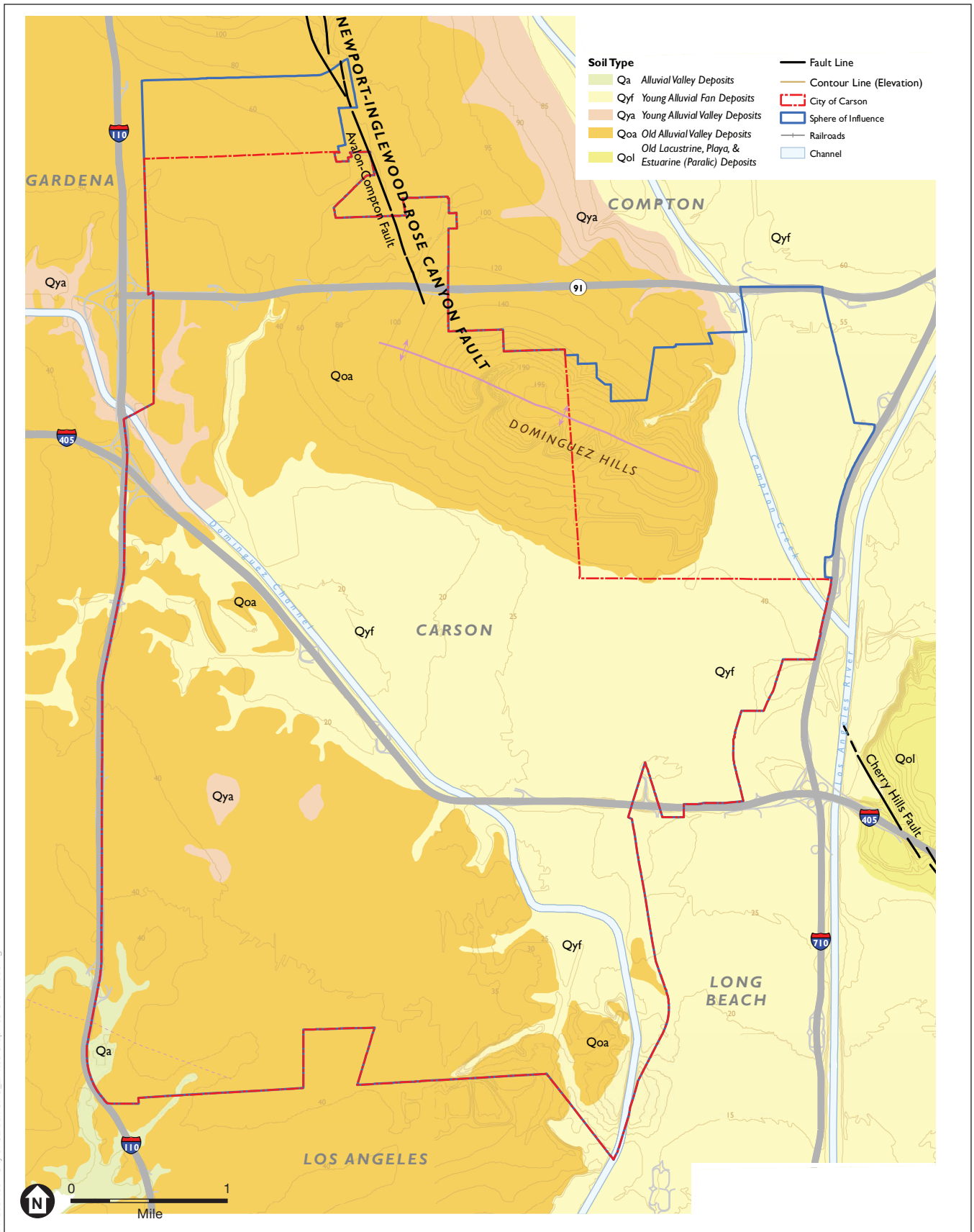
Geological and Paleontological Setting

The Planning Area is situated in the northerly end of the Peninsular Ranges Geomorphic Province of Southern California. This geomorphic province encompasses an area that extends approximately 125 miles from the Transverse Ranges and the Los Angeles River Basin south to the Mexican border and beyond another approximately 775 miles to the tip of Baja California.¹ The Peninsular Ranges province varies in width from approximately 30 to 100 miles and is characterized by northwest-trending mountain range blocks separated by similarly trending faults.

The predominant rock type that underlies the Peninsular Ranges province is a Cretaceous age igneous rock (granitic rock) referred to as the Southern California batholith. Older Jurassic age metavolcanic and metasedimentary rocks and older Paleozoic limestone, altered schist, and gneiss are present within the province. Cretaceous-age marine sedimentary rocks and younger Tertiary-age rocks comprised of volcanic, marine, and non-marine sediments overlie the older rocks. More recent Quaternary sediments, primarily of alluvial origin, comprise the low-lying valley and drainage areas within the region. As shown in **Figure 3.6-1, Generalized Geologic Map**, the north, west, and southern portions of the city of Carson are underlain by Pleistocene marine and non-marine older alluvium, lake, playa, and terrace deposits (Qoa), while the central and southeastern portions of Carson are underlain by Pleistocene-Holocene, unconsolidated and semi-consolidated, marine and non-marine alluvium, lake, playa and terrace deposits (Q).²

¹ Norris and Webb, 1990. *Geology of California*.

² California Geological Survey, 2010. Geologic Map of California City of Carson. Online. <http://maps.conservation.ca.gov/cgs/gmc/App/index.html>. Accessed November 2017.



SOURCE: County of Los Angeles, 2017; City of Carson, 2020; California Geological Survey, Department of Conservation, 2020; USGS, 2021; Dyett & Bhatia, 2021

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Figure 3.6-1
Generalized Geologic Map

Local Geographic Setting

The city of Carson is situated in the Los Angeles Basin, a region divided into four structural blocks that include anticlinal uplifted zones and synclinal depressions.³ The structural blocks are generally bounded by fault systems. Carson is situated in the southwestern block of the seaward part of the basin which is bounded by the Newport-Inglewood zone of deformation. This block is a combination of folds and faults and is characterized by overlapping staggering anticlinal hills. The most prominent landforms in the city of Carson are the Dominguez Hills, which represent the central portion of the Newport-Inglewood fault zone (or uplift), and the Dominguez Gap, which characterize the area's northwest-trending faults and folds. The latter includes the Newport-Inglewood fault zone, the Paramount syncline, the Dominguez anticline, the Gardena syncline, the Wilmington anticline, and Wilmington syncline.⁴ The Dominguez Hills range in elevation from approximately 20 feet above mean sea level (msl) to 195 feet.⁵ The Dominguez Gap constitutes a section of the Downey plain, between the Dominguez Hills and the northwestern extension of Signal Hill. The gap is approximately 1.6 miles wide at its narrowest point and approximately seven miles long with an estimated 150 feet of deposited Holocene material.⁶ The Holocene alluvium consists of poorly consolidated sand, silt clay and gravel. The soils range from sand to clay loam soil types.

Geology

Soils

Soil surveys of the Los Angeles area have identified as many as 17 different soil types in the region.⁷ Soils in Carson range from sand to clay loam soil types. As shown in the County of Los Angeles General Plan Update EIR, the city is primarily underlain by Ramona loam and sandy loam, Yolo gravelly sandy loam, sandy loam, fine sandy loam, and clay loam, Hanford fine sandy loam, Oakley fine sand, and Chino silt loam. In general, sandy soils typically have low cohesion, and have a relatively higher potential for erosion from surface runoff when exposed in cut slopes or utilized near the face of fill embankments. Surface soils with higher amounts of clay tend to be less erodible as the clay acts as a binder to hold the soil particles together. Soil types within the Planning Area are detailed in **Table 3.6-1, General Physical Properties of Soils in the Carson Area**, and mapped in Figure 3.6-1.

³ Norris and Webb, 1990. *Geology of California*.

⁴ Syncline: a fold that is convex downwards; Anticline: a fold that is convex upwards.

⁵ City of Carson, 2002. General Plan Environmental Impact Report (Volume II). Section 4.6 Geologic and Seismic Hazards.

⁶ City of Carson, 2002. General Plan Environmental Impact Report (Volume II). Section 4.6 Geologic and Seismic Hazards.

⁷ USDA Bureau of Soils (now Natural Resource Conservation Service), 1903. Soil Survey of the Los Angeles Area, California, Mesmer, Louis B.

**TABLE 3.6-1
 GENERAL PHYSICAL PROPERTIES OF SOILS IN THE CARSON AREA**

Soil Association	Soil Type	Erosion Potential	Shrink/Swell Potential
Ramona	Sandy loam, fine sandy loams, and sandy clay loam	Low - Moderate	High
Yolo	Gravelly sandy loam, sandy loam, clay loam	Low - Moderate	Moderate
Hanford	Fine sandy loam	Low	Low
Oakley	Fine sand	Moderate - High	Low
Chino	Silt loam	Low	Moderate

SOURCE: Los Angeles County, 2014. *Los Angeles County General Plan Update Draft Environmental Impact Report* (SCH# 2011081042). June.

Expansive Soils

Expansive soils include clay minerals that are characterized by their ability to undergo significant volume change (shrink or swell) due to variation in moisture content. Sandy soils are generally not expansive. Changes in soil moisture content can result from rainfall, irrigation, pipeline leakage, surface drainage, perched groundwater, drought, or other factors. Volumetric change of expansive soil may cause excessive cracking and heaving of structures with shallow foundations, concrete slabs-on-grade, or pavements supported on these materials. As shown in Table 3.6-1, soils within the city of Carson generally have low to moderate shrink-swell potential, except for the Ramona clay loam which has a high potential. Sandy soils typically have a low expansion potential and clayey soils are typically expansive.

Subsidence and Differential Settlement

Subsidence is characterized as a sinking of ground surface relative to surrounding areas and can generally occur where deep soil deposits are present. Subsidence in areas of deep soil deposits is typically associated with regional groundwater withdrawal or other fluid withdrawal from the ground such as oil and natural gas. Subsidence can result in the development of ground cracks and damage to subsurface vaults, pipelines, and other improvements.

Historically, subsidence has occurred in Carson, due to the withdrawal of oil from the Wilmington oil field which is located within the city. Subsidence extended along the Newport-Inglewood structural zone between Signal Hill and the Port of San Pedro on the south and Redondo Beach on the north. Total subsidence reached a maximum of 29 feet over the crest of the Wilmington anticline, where most of the oil had been withdrawn. There is no documented ground subsidence associated with the Dominguez oil field, also located in the city. By the early 1980s, water injection halted subsidence at the oil fields and, subsequently, no further subsidence has been documented.⁸

⁸ State of California Regional Water Quality Control Board, 2014. Former Kast Property Tank Farm Site Remedial Action Plan Draft Environmental Impact Report (SCH No. 2014031053) Volume I, November. Online: https://geotracker.waterboards.ca.gov/community_involvement/9711438834/Volume%20I.pdf. Accessed June 2021.

Differential settlement occurs in loose, cohesionless sediments where differences in densities in adjacent materials lead to different degrees of compaction during ground shaking. In the case of saturated cohesionless sediments, post-earthquake settlement may occur when excess pore-water pressures generated by the earthquake dissipate. Given the lateral and vertical variation of the alluvial soils underlying Carson, differential sediment could result from an earthquake in areas thought to have a low susceptibility to settlement. Buildings, structures, and other improvements may be subject to excessive settlement-related distress when compressible soils or collapsible soils are present. Compressible soils are generally comprised of soils that undergo consolidation when exposed to new loading, such as fill or foundation loads. Soil collapse is a phenomenon where the soils undergo a significant decrease in volume upon increase in moisture content, with or without an increase in external loads. The city is underlain by older alluvial deposits which are generally unconsolidated, reflecting a depositional history without substantial loading, and may be subject to collapse.

Corrosive Soils

The geologic environment within the city of Carson could include soil conditions potentially corrosive to concrete and metals. Corrosive soil conditions may exacerbate the corrosion hazard to buried conduits, foundations, and other buried concrete or metal improvements. Corrosive soils could cause premature deterioration of these underground structures or foundations.

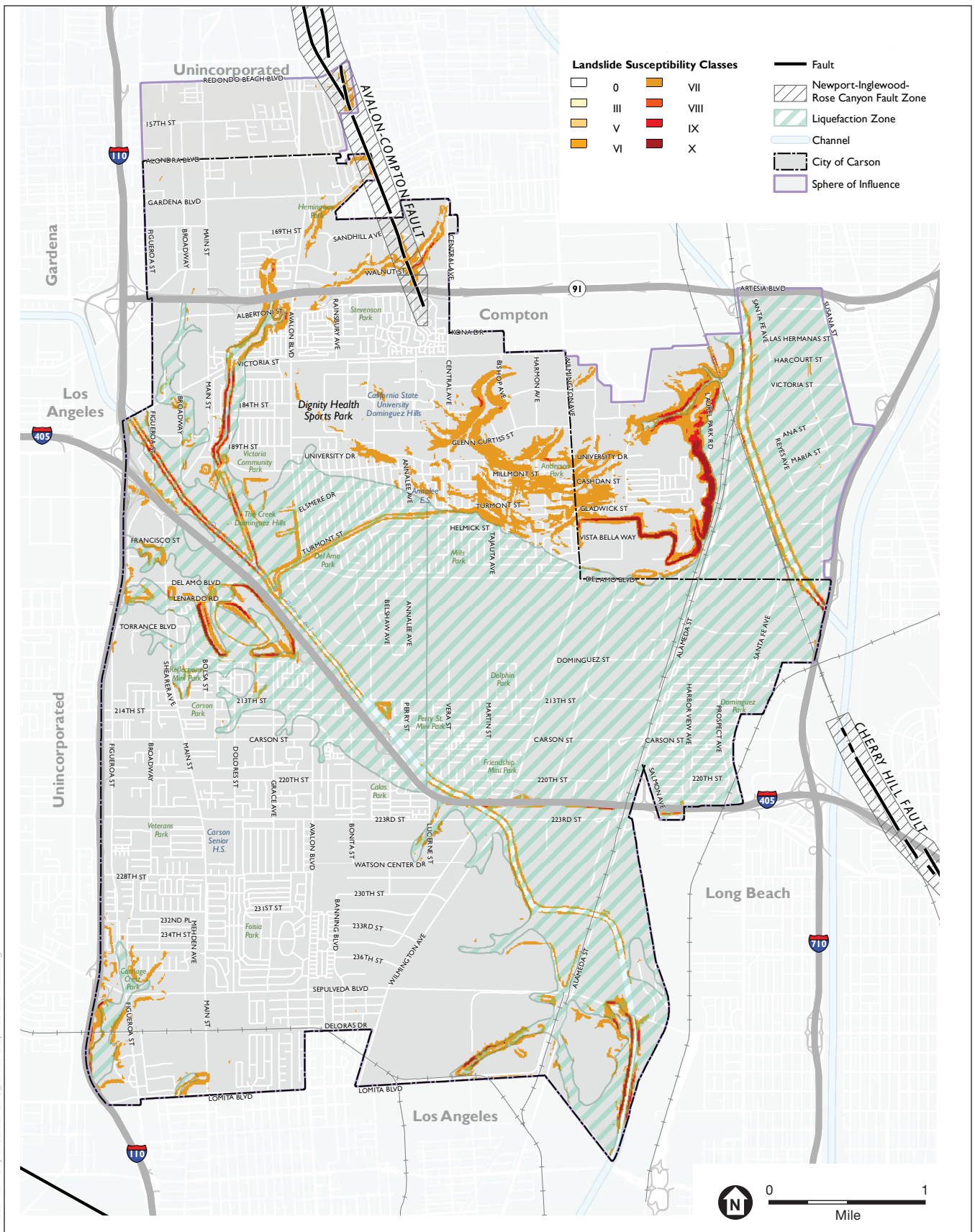
Seismic and Geologic Hazards

Seismic Conditions

Southern California is a seismically-active region. Carson is located between two major, active faults: the Newport-Inglewood-Rose Canyon Fault to the east and northeast and the Palos Verdes Fault to the west and southwest. The predominant tectonic activity associated with these and other faults within the regional tectonic framework is right-lateral, strike-slip and/or reverse movement. Other potentially active fault zones in proximity to Carson include the Elsinore-Whittier Fault Zone, the Santa Monica Fault Zone, the San Jacinto Fault Zone and the San Andreas Fault Zone. An earthquake event on one of the active or potentially active faults near the city could result in strong ground shaking, which could affect structures in the city.

The Avalon-Compton Fault, which is part of the Newport-Inglewood – Rose Canyon Fault Zone, is the only active fault located in the Planning Area and is located immediately east of Avalon Boulevard and north of SR-91, as mapped in **Figure 3.6-2, *Seismic and Geologic Hazards***, which also shows the corresponding Alquist-Priolo Fault Zone. Historically, the Avalon-Compton Fault and regional shear zone has moderate to high seismic activity with numerous earthquakes greater than Richter magnitude four. The Newport-Inglewood Fault extends from the southern edge of the Santa Monica Mountains southeastward to an area offshore of Newport Beach. The Newport-Inglewood Fault Zone is considered active based on historic earthquakes; the 1933 Long Beach Earthquake is attributed to the Newport-Inglewood Fault Zone. The maximum probable earthquake along this fault zone is between 6.0 and 7.4.⁹

⁹ Southern California Earthquake Data Center, 2013. Significant Earthquakes and Faults, Newport-Inglewood Fault Zone. Online. <http://scedc.caltech.edu/significant/newport.html>. Accessed June 2021.



D:\770087.00 - City of Carson GPU_EIR\05 Graphics-GIS-Modeling

SOURCE: Los Angeles County GIS, 2020; CGS, 2011; City of Carson, 2017; Los Angeles GIS Data Portal, 2017; Dyett & Bhatia, 2021

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Figure 3.6-2
Seismic and Geologic Hazards



Given the limited presence of known faults in the Planning Area, the potential for seismic hazards in Carson is relatively low, although there is potential for damage from potential earthquakes in the greater Southern California region. These hazards may be addressed through adherence with existing building codes including the requirements of CBC Chapter 18, and state and local regulations, though exposure to seismic risks cannot be completely eliminated. Additionally, due to the presence of refineries and heavy industry within Carson, understanding the location of fault lines is a critical component of a safe community.

Ground Shaking and Fault Rupture

An earthquake of moderate to high magnitude generated within the region could cause significant ground shaking within the city. The exact degree of shaking experienced at a given location would depend on a host of site-specific factors, such as: the magnitude of the seismic event, the duration of the seismic event, the distance from a given site to the zone of rupture (i.e., hypocenter), local site-specific geologic conditions (i.e., nature, thickness, and extent of underlying soil and/or bedrock), and broader, often regional geologic factors such as basin geometry. In general, the severity of seismic ground shaking tends to abate with increasing distance from the event hypocenter. Seismic ground shaking, if sufficiently intense and sustained, can result in significant damage to, or catastrophic failure of buildings or other human-made structures.

Seismic activity along nearby or more distant fault zones is likely to cause ground shaking within the city limits. If an earthquake were to occur, residents of the city could expect to feel potential ground shaking at a Modified Mercalli intensity of VII, very strong shaking with moderate damage,¹⁰ with a chance of damage at 2 to 5 percent.¹¹

Surface fault rupture can occur during significant seismic events. The process generally involves the sudden failure and displacement of the earth's surface along a fault trace or fault zone. The magnitude and geometry of such ground displacement is highly variable. Buildings or other manmade structures that lie atop the fault can experience serious damage or catastrophic failure during a strong earthquake.

Distances from the Planning Area to the active faults described above are presented in **Table 3.6-2, Principal Regional Active Faults**. These distances represent the closest portion of the listed fault to the closest geographic portion of the city. If an earthquake would occur along the Avalon-Compton Fault, which runs through the northeastern part of the city, fault rupture could occur along that fault line. To prevent the construction of buildings used for human occupancy on the surface trace of active faults, the Alquist-Priolo Earthquake Fault Zoning Act was passed to address the hazards of surface fault rupture. Carson has an Alquist-Priolo Fault Zone in the northeastern portion of the city which starts within the city limits at East Alondra Boulevard and terminates about halfway between

¹⁰ U.S. Geological Survey, 2016. USGS Forecast for Ground Shaking Intensity from Natural and Induced Earthquakes in 2016. Online. https://earthquake.usgs.gov/hazards/induced/images/MMI_2016.pdf. Accessed November 2017.

¹¹ U.S. Geological Survey, 2017. New USGS maps identify potential ground-shaking hazards in 2017 from both human-induced and natural earthquakes in the central and eastern U.S. Online.

Artesia Boulevard and Victoria Boulevard in the old Dominguez Oil Field.^{12,13} This Alquist-Priolo Fault Zone is for the Avalon-Compton Fault.

**TABLE 3.6-2
 PRINCIPAL REGIONAL ACTIVE FAULTS**

Fault	Approximate Fault Distance to Site* Miles (Kilometers)	Maximum Moment Magnitude (M_{max})
Avalon Compton Fault (Newport-Inglewood – Rose Canyon Fault Zone)	0 (0)	6.9
Palos Verdes	1.7 (2.8)	7.1
Whittier-Elsinore Fault Zone	13.0 (20.9)	6.8
Santa Monica Fault Zone	14.8 (23.8)	6.6
San Jacinto Fault Zone	51.4 (82.3)	6.7
San Andreas Fault Zone	59.9 (96.3)	7.3

NOTES:

* Distances represent the closest portion of the listed fault to the closest geographic portion of the city and were measured with Google Earth and Quaternary Fault Data from the USGS.

SOURCE: California Department of Conservation, 2017. Open-File Report 96-08 Probabilistic Seismic Hazard Assessment for the State of California.

Liquefaction and Landslide Zones

Liquefaction is a process whereby strong seismic shaking causes unconsolidated, water-saturated sediment to temporarily lose strength and behave as a fluid. Liquefaction typically occurs in areas underlain with loose saturated cohesionless soils within the upper 50 feet of subsurface materials. This process can lead to near-surface or surface ground failure that can result in extensive damage to or catastrophic failure of buildings, roads, utility lines, and other human-made structures. Liquefaction can manifest as lateral ground spreading or flow, localized sand boils (i.e., eruptions of fluidized sediment), or rapid subsidence and an accompanying loss of bearing strength.

Earthquake-induced landslides are a secondary earthquake hazard that occurs from ground shaking. They can destroy roads, buildings, utilities, and other critical facilities necessary to respond and recover from an earthquake. Many communities in Southern California have a high likelihood of encountering such risks, especially in areas with steep slopes.

Carson has several liquefaction hazard areas but does not have any areas identified as landslide hazard areas.^{14,15} The liquefaction hazard areas are primarily located near water, primarily

¹² California Geological Survey, 1986a. Earthquake Zones of Required Investigation Inglewood Quadrangle. Online: http://gmw.conservation.ca.gov/SHP/EZRIM/Maps/INGLEWOOD_EZRIM.pdf. Accessed June 2021.

¹³ California Geological Survey, 1986b. Earthquake Zones of Required Investigation Torrance Quadrangle. Online: http://gmw.conservation.ca.gov/SHP/EZRIM/Maps/TORRANCE_EZRIM.pdf. Accessed June 2021.

¹⁴ California Geological Survey, 1986a. Earthquake Zones of Required Investigation Inglewood Quadrangle. Online: http://gmw.conservation.ca.gov/SHP/EZRIM/Maps/INGLEWOOD_EZRIM.pdf. Accessed June 2021.

¹⁵ California Geological Survey, 1986b. Earthquake Zones of Required Investigation Torrance Quadrangle. Online: http://gmw.conservation.ca.gov/SHP/EZRIM/Maps/TORRANCE_EZRIM.pdf. Accessed June 2021.

alluvial and former slough areas. A significant portion of the Planning Area has been designated as liquefaction hazard zones and development in these areas requires a geotechnical investigation report as part of the environmental and building permit process. The Liquefaction Hazard Zones, shown in Figure 3.6-2, are located in the southwestern corner between I- 110 and Figueroa Boulevard from Lomita Boulevard up to 234th Street, with another small branch following Lomita Boulevard to Main Street. The larger Liquefaction Hazard Zone is located in the central part of the city along the Dominguez Channel and the Los Angeles River in the eastern portion of the city.

Ground cracking, ground lurching and lateral spreading are secondary features resulting from strong to moderately strong ground shaking and may be associated with liquefaction. Ground cracking usually occurs in near-surface materials, reflecting differential compaction or liquefaction of underlying materials. The potential for ground cracking exists in those areas of the city that have a moderate to high potential for liquefaction. Ground lurching results when soft, water-saturated surface soils are thrown into undulatory motion. Lateral spreading (a form of landslide) is referred to as limited displacement ground failure, often associated with liquefaction. Compact surface materials may slide on a liquefied or low shear strength layer at a shallow depth, moving laterally several feet down slopes of less than two degrees. Such a condition may be present where conditions conducive to shallow liquefaction exist.

Seismically related slope stability problems include landslides, rockfalls, mudslides and avalanches. Due to the relative absence of significant elevation changes in the city, slope instability is limited to the slopes adjacent to the flood control channels that intersect the city.

Paleontological Resources and Unique Geologic Features

Paleontological resources potential is defined as the potential for a geologic unit to produce scientifically significant fossils. This is determined by rock type, past history of the geologic unit in producing significant fossils, and fossil localities recorded from that unit. Paleontological potential is derived from the known fossil data collected from the entire geologic unit, not just from a specific survey. In its “Standard Procedures for the Assessment and Mitigation of Adverse Impacts to Paleontological Resources,” the Society of Vertebrate Paleontology (SVP)¹⁶ defines four categories of paleontological potential for rock units: high, low, undetermined, and no potential:

- **High Potential.** Rock units from which vertebrate or significant invertebrate, plant, or trace fossils have been recovered are considered to have a high potential for containing additional significant paleontological resources. Rocks units classified as having high potential for producing paleontological resources include, but are not limited to, sedimentary formations and some volcanoclastic formations (e.g., ashes or tephra), and some low-grade metamorphic rocks which contain significant paleontological resources anywhere within their geographical extent, and sedimentary rock units temporally or lithologically suitable for the preservation of

¹⁶ Society of Vertebrate Paleontology (SVP), 2010. Standard procedures for the assessment and mitigation of adverse impacts to paleontological resources, Online: http://vertpaleo.org/Membership/Member-Ethics/SVP_Impact_Mitigation_Guidelines.aspx. Accessed October 2020.

fossils (e.g., middle Holocene and older, fine-grained fluvial sandstones, argillaceous and carbonate-rich paleosols, cross-bedded point bar sandstones, fine-grained marine sandstones).

- **Low Potential.** Reports in the paleontological literature or field surveys by a qualified professional paleontologist may allow determination that some rock units have low potential for yielding significant fossils. Such rock units will be poorly represented by fossil specimens in institutional collections, or based on general scientific consensus only preserve fossils in rare circumstances and the presence of fossils is the exception not the rule (e.g. basalt flows or Recent colluvium). Rock units with low potential typically will not require impact mitigation measures to protect fossils.
- **Undetermined Potential.** Rock units for which little information is available concerning their paleontological content, geologic age, and depositional environment are considered to have undetermined potential. Further study is necessary to determine if these rock units have high or low potential to contain significant paleontological resources. A field survey by a qualified professional paleontologist to specifically determine the paleontological resource potential of these rock units is required before a paleontological resource impact mitigation program can be developed. In cases where no subsurface data are available, paleontological potential can sometimes be determined by strategically located excavations into subsurface stratigraphy.
- **No Potential.** Some rock units have no potential to contain significant paleontological resources, for instance high-grade metamorphic rocks (such as gneisses and schists) and plutonic igneous rocks (such as granites and diorites). Rock units with no potential require no protection nor impact mitigation measures relative to paleontological resources. For excavations in rock units of known high potential, a Qualified Professional Paleontologist or Paleontological Resources Monitor (as defined by the SVP Guidelines) should be present initially during 100 percent of the earth-moving activities. After 50 percent of excavations are complete in either an area or rock unit and no fossils of any kind have been discovered, the level of monitoring can be reduced or suspended entirely at the Qualified Professional Paleontologist's discretion. If potential paleontological resources are discovered during excavations in a rock unit with low potential, all ground disturbance in the vicinity of the find should stop immediately until a Qualified Professional Paleontologist can assess the nature and importance of the find and recommend appropriate salvage, treatment, and future monitoring and mitigation.

For geologic units with high or undetermined potential, field surveys by a Qualified Professional Paleontologist should be conducted to specifically determine the paleontological resource potential of the rock units present within the study area.

History Museum of Los Angeles County Database Search

A database search for records of fossil localities within the city was conducted by the Natural History Museum of Los Angeles County (LACM) on September 25, 2017. The purpose of the museum records search was to: (1) determine whether any previously recorded fossil localities occur in the area; (2) assess the potential for disturbance of these localities during construction; and (3) assist in evaluating the paleontological sensitivity of the area.

The results of the paleontological records search indicated that seven vertebrate localities (LACM 1165, 1643, 1919, 3319, 4129, 3823 and 3085) from older Quaternary deposits have been recorded within the boundaries of the city and that several other localities from the same

sedimentary deposits occur nearby. Old lagoonal deposits (from the Dominguez Channel) are located at the surface in the northwestern portion of the city. In the central and eastern portions of the city there are surface deposits composed of younger Quaternary alluvium. Otherwise, surface deposits in the city (including the elevated terrain of the Dominguez Hill) consist of older Quaternary Alluvium. The younger Quaternary deposits are not known for being fossiliferous in the uppermost layers; however, at depth these deposits are underlain by older Quaternary deposits, which have produced an assortment of vertebrate fossil localities.¹⁷

LACM 1643 located in the northern portion of the city (near the intersection of 190th Street and Annalee Avenue) yielded a fossil specimen of mammoth at a depth of 8 to 10 feet below the surface. LACM 1919 located in the central-southern portion of the city (south of 223rd Street and west of Wilmington Avenue) yielded a fossil specimen of mammoth at 10 feet below the surface. LACM 1165, 3319 and 4129 located along the southeastern portion of the city (and east of LACM 1919) yielded a fossil specimen of mammoth at 30 feet below surface. LACM 3823 located in the southwestern portion of the city yielded a specimen of fossil camel at 12 to 14 feet below street level. Lastly, LACM 3085 (probably from the marine late Pleistocene San Pedro Sand) located in the southwestern portion of the city produced fossil specimens of ray and dolphin at an unknown depth.¹⁸

The LACM has indicated that grading or shallow excavations in the upper feet of the old lagoonal deposits or the younger Quaternary Alluvium deposits are unlikely to uncover fossil vertebrate remains. However, deeper excavations in the city reaching down into older Quaternary deposits, as well as excavations in older Quaternary deposits found at the surface have the potential for producing vertebrate fossils. As a result, the LACM recommends that any substantial excavations in the city should be monitored by a qualified paleontologist.¹⁹ Based on these results, the Planning Area has a low- to high-potential for the discovery of paleontological resources in the city of Carson.

3.6.3 Regulatory Framework

This section provides the relevant federal, state, regional, and local regulations applicable to the Project.

Federal

U.S. Geological Survey Landslide Hazard Program

The United States Geological Survey (USGS) created the Landslide Hazard Program in the mid-1970s; the primary objective of the program is to reduce long-term losses from landslide hazards by improving our understanding of the causes of ground failure and suggesting mitigation strategies. The federal government takes the lead role in funding and conducting this research,

¹⁷ McLeod, Samuel, 2017. Paleontological Records Check for the proposed Carson General Plan Update Project, in the City of Carson, Los Angeles County, project area.

¹⁸ McLeod, Samuel, 2017. Paleontological Records Check for the proposed Carson General Plan Update Project, in the City of Carson, Los Angeles County, project area.

¹⁹ McLeod, Samuel, 2017. Paleontological Records Check for the proposed Carson General Plan Update Project, in the City of Carson, Los Angeles County, project area.

whereas the reduction of losses due to geologic hazards is primarily a state and local responsibility. In Los Angeles County, plans and programs designed for the protection of life and property are coordinated by the Los Angeles County Office of Emergency Management.

Earthquake Hazards Reduction Act

The Earthquake Hazards Reduction Act was enacted in 1977 to “reduce the risks to life and property from future earthquakes in the United States through the establishment and maintenance of an effective earthquake hazards and reduction program.” To accomplish this, the Act established the National Earthquake Hazards Reduction Program (NEHRP). NEHRP implementation activities are conducted primarily by FEMA. Congress has periodically reviewed and reauthorized NEHRP; the program was last amended in 2004.

NEHRP’s mission includes improved understanding, characterization, and prediction of hazards and vulnerabilities; improvement of building codes and land use practices; risk reduction through post-earthquake investigations and education; development and improvement of design and construction techniques; improvement of mitigation capacity; and accelerated application of research results. The NEHRP designates the National Institute of Standards and Technology (NIST) as the lead agency of the program. As lead agency, it develops, evaluates, and tests earthquake resistant design and construction practices for implementation in the building codes and engineering practice. Under NEHRP, the Federal Emergency Management Agency (FEMA) is responsible for developing earthquake risk reduction tools and promoting their implementation, as well as supporting the development of disaster-resistant building codes and standards. USGS monitors seismic activity, provides earthquake hazard assessments, and conducts and supports targeted research on earthquake causes and effects. Programs under NEHRP help inform and guide planning and building code requirements such as emergency evacuation responsibilities and seismic code standards.

Disaster Mitigation Act of 2000

The Disaster Mitigation Act of 2000 (DMA2K) (Public Law 106-390) amended the Robert T. Stafford Disaster Relief and Emergency Assistance Act of 1988 to establish a Pre-Disaster Mitigation (PDM) program and new requirements for the federal post-disaster Hazard Mitigation Grant Program (HMGP). DMA2K encourages and rewards local and state pre-disaster planning. It promotes sustainability and seeks to integrate state and local planning with an overall goal of strengthening statewide hazard mitigation. This enhanced planning approach enables local, tribal, and state governments to identify specific strategies for reducing probable impacts of natural hazards such as floods, fire, and earthquakes. In order to be eligible for hazard mitigation funding after November 1, 2004, local governments are required to develop a Hazard Mitigation Plan that incorporates specific program elements of the DMA2K law.

Antiquities Act

Federal regulations regarding paleontological resources are generally applicable to a project if that project includes federally owned or federally managed lands or involves a federal agency license, permit, approval, or funding. The Antiquities Act of 1906 (54 U.S.C. 320301-320303 and 18 U.S.C. 1866(b)) requires protection of historic landmarks, historic and prehistoric structures,

as well as other objects of historic or scientific interest on federally administered lands, the latter of which would include fossils. The Antiquities Act establishes a permit system for the disturbance of any object of antiquity on federal land and also sets criminal sanctions for violation of these requirements. In 1958, the Federal-Aid Highways Act of 1958 extended the Antiquities Act to specifically apply to paleontological resources.

Code of Federal Regulations, Title 40

Title 40: Protection of Environment is the section of the Code of Federal Regulations (CFR) that deals with EPA's mission of protecting human health and the environment. Title 40 Code of CFR Section 1508.2 identifies paleontological resources as a subset of scientific resources.

State

California Multi-Hazard Mitigation Plan

The State of California Multi-Hazard Mitigation Plan, also known as the State Hazard Mitigation Plan (SHMP), was approved by FEMA in 2013. The SHMP outlines present and planned activities to address natural hazards. The adoption of the SHMP qualifies the State of California for federal funds in the event of a disaster. The state is required under DMA2K, described above, to review and update its SHMP and resubmit for FEMA approval at least once every five (5) years to ensure the continued eligibility for federal funding. The SHMP provides goals and strategies which address minimization of risks associated with natural hazards and response to disaster situations. The SHMP notes that the primary sources of losses in the State of California are fire and flooding.

California Building Standards Code

The California Building Standards Commission is responsible for coordinating, managing, adopting, and approving building codes in California. The State of California provides minimum standards for building design through the California Building Standards Code (CBC) (California Code of Regulations Title 24). Where no other building codes apply, Chapter 18 and Appendix J of the CBC regulates excavation, foundations, and retaining walls. The CBC applies to building design and construction in the state and is based on the International Building Code (IBC) used widely throughout the country (generally adopted on a state-by-state or district-by-district basis). The IBC has been modified for California conditions with numerous more detailed or more stringent regulations.

The state earthquake protection law (California Health and Safety Code Section 19100 et seq.) requires that structures be designed to resist stresses produced by lateral forces caused by wind and earthquakes. Section 1613 requires that all structures be designed and constructed to resist the effects of earthquake motions in accordance with the Minimum Design Loads for Buildings and Other Structures established by the American Society of Civil Engineers. The CBC requires an evaluation of seismic design that falls into Categories A through F (where F requires the most earthquake-resistant design) for structures designed for a project site. The CBC philosophy focuses on “collapse prevention”, meaning that structures are designed for prevention of collapse for the maximum level of ground shaking that could reasonably be expected to occur at a site. Chapter 16 of the CBC and the American Society of Civil Engineers Publication 7-10 (ASCE7-

10) specifies exactly how each seismic design category is to be determined on a site-specific basis through the site-specific soil characteristics and proximity to potential seismic hazards.

Chapter 18 of the CBC regulates the excavation of foundations and retaining walls. This chapter regulates the preparation of a preliminary soil report, engineering geologic report, geotechnical report, and supplemental ground-response report. Chapter 18 also regulates analysis of expansive soils and the determination of the depth to groundwater table. For Seismic Design Category C, Chapter 18 requires analysis of slope instability, liquefaction, and surface rupture attributable to faulting or lateral spreading. For Seismic Design Categories D, E, and F, Chapter 18 requires these same analyses plus an evaluation of lateral pressures on basement and retaining walls, liquefaction and soil strength loss, and lateral movement or reduction in foundation soil-bearing capacity. It also requires mitigation measures to be considered in structural design. Mitigation measures may include ground stabilization, selection of appropriate foundation type and depths, selection of appropriate structural systems to accommodate anticipated displacements, or any combination of these measures. The potential for liquefaction and soil strength loss must be evaluated for site-specific peak ground acceleration magnitudes and source characteristics consistent with the design earthquake ground motions. Peak ground acceleration must be determined from a site-specific study, the contents of which are specified in CBC Chapter 18 and through the California Division of Mines and Geology.

Finally, Appendix Chapter J of the CBC regulates grading activities, including drainage and erosion control and construction on unstable soils, such as expansive soils and areas subject to liquefaction.

California Alquist-Priolo Earthquake Fault Zoning Act

The Alquist-Priolo Earthquake Fault Zoning Act was passed in 1972 to mitigate the hazard of surface faulting to structures used for human occupancy. The main purpose of the law is to prevent the construction of buildings used for human occupancy on top of active faults. The law only addresses the hazard of surface fault rupture and is not directed toward other earthquake hazards, such as ground shaking or landslides.

The law requires the State Geologist to establish regulatory zones (known as Earthquake Fault Zones or Alquist-Priolo Zones) around the surface traces of active faults, and to issue appropriate maps. As discussed in Section 3.6.2, *Environmental Setting*, the Avalon-Compton Fault is the only active fault in the Planning Area as mapped in Figure 3.6-2, *Seismic and Geologic Hazards*, which also shows the corresponding Alquist-Priolo Fault Zone.

Hospital Facilities Seismic Safety Act of 1973

The Alfred E. Alquist Hospital Facilities Seismic Safety Act (HSSA) was passed in 1973 to ensure that hospitals in California conform to high construction standards and are reasonably capable of providing services to the public after a disaster. The HSSA requires the establishment of rigorous seismic design regulations for hospital buildings and requires that new hospitals and additions to hospitals have the capacity, as far as is practical, to remain functional after a major earthquake. State law requires that all existing hospital buildings providing general acute care as

licensed under provisions of Section 1250 of the California Health and Safety Code be in compliance with the intent of the HSSA by the year 2030.

California Department of Transportation

Jurisdiction of the California Department of Transportation (Caltrans) includes state and interstate routes within California. Any work within the right-of-way of a federal or state transportation corridor is subject to Caltrans regulations governing allowable actions and modifications to the right-of-way. Caltrans standards incorporate the CBC and contain numerous rules and regulations to protect the public from seismic hazards such as surface fault rupture and ground shaking. In addition, Caltrans standards require that projects be constructed to minimize potential hazards associated with cut and fill operations, grading, slope instability, and expansive or corrosive soils, as described in the Caltrans Highway Design Manual.

National Pollution Discharge Elimination System Permits

In California, the State Water Resources Control Board (SWRCB) and its Regional Water Quality Control Board (RWQCB) administer the National Pollution Discharge Elimination System (NPDES) program. The NPDES permit system was established as part of the Federal Clean Water Act to regulate both point source discharges and non-point source discharges to surface water of the United States, including the discharge of soils eroded from construction sites.

The NPDES program consists of characterizing receiving water quality, identifying harmful constituents (including siltation), targeting potential sources of pollutants (including excavation and grading operations), and implementing a comprehensive stormwater management program. Construction and industrial activities typically are regulated under statewide general permits that are issued by the SWRCB. Additionally, the SWRCB issues Water Discharge Requirements that also serve as NPDES permits under the authority delegated to the RWQCBs, under the Clean Water Act. See Section 3.9, *Hydrology and Water Quality*, for more information about the NPDES.

Paleontological Resources

Public Resources Code Section 5097.5 and Section 30244

Requirements for paleontological resource management are included in Public Resources Code Section 5097.5 and Section 30244. These statutes prohibit the removal of any paleontological site or feature from public lands without permission of the jurisdictional agency, define the removal of paleontological sites or features as a misdemeanor, and require reasonable mitigation of adverse impacts on paleontological resources from developments on public (state, county, city, district) lands.

Society of Vertebrate Paleontology Guidelines

The SVP has established standard guidelines 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.²⁰ Most practicing professional vertebrate paleontologists adhere closely to the SVP's assessment, mitigation, and monitoring requirements as specifically provided in its standard guidelines. Most state regulatory agencies with paleontological resource-specific Laws, Ordinances, Regulations, and Standards (LORS) accept and use the professional standards set forth by the SVP.

Paleontological Resources Significance Criteria

As defined by the SVP, significant nonrenewable paleontological resources are:²¹

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 considered to be older than recorded human history and/or older than middle Holocene (i.e., older than about 5,000 radiocarbon years).

As defined by the SVP, significant fossiliferous deposits are:²²

A rock unit or formation which contains significant nonrenewable paleontological 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). Paleontological 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, all identifiable vertebrate fossils are considered to have significant scientific value.²³ 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.

²⁰ Society of Vertebrate Paleontology, 2010. Standard Procedures for the Assessment and Mitigation of Adverse Impacts to Paleontological Resources. Online. https://vertpaleo.org/wpcontent/uploads/2021/01/SVP_Impact_Mitigation_Guidelines.pdf. Accessed October 2021.

²¹ Society of Vertebrate Paleontology, 2010. Standard Procedures for the Assessment and Mitigation of Adverse Impacts to Paleontological Resources, 11. Online. https://vertpaleo.org/wpcontent/uploads/2021/01/SVP_Impact_Mitigation_Guidelines.pdf. Accessed October 2021.

²² Society of Vertebrate Paleontology, 2010. Standard Procedures for the Assessment and Mitigation of Adverse Impacts to Paleontological Resources. Online. https://vertpaleo.org/wpcontent/uploads/2021/01/SVP_Impact_Mitigation_Guidelines.pdf. Accessed October 2021.

²³ Society of Vertebrate Paleontology, 2010. Standard Procedures for the Assessment and Mitigation of Adverse Impacts to Paleontological Resources. Online. https://vertpaleo.org/wpcontent/uploads/2021/01/SVP_Impact_Mitigation_Guidelines.pdf. Accessed October 2021.

A geologic unit known to contain significant fossils is considered “sensitive” to adverse impacts if there is a high probability that earth-moving or ground-disturbing activities in that rock unit will either directly or indirectly disturb or destroy fossil remains. Paleontological sites indicate that the containing sedimentary rock unit or formation is fossiliferous. The limits of the entire rock formation, both areal and stratigraphic, therefore define the scope of the paleontological potential in each case.²⁴

Fossils are contained within surficial sediments or bedrock and are therefore not observable or detectable unless exposed by erosion or human activity. In summary, paleontologists cannot know either the quality or quantity of fossils prior to natural erosion or human-caused exposure. As a result, even in the absence of surface fossils, it is necessary to assess the sensitivity of rock units based on their known potential to produce significant fossils elsewhere within the same geologic unit (both within and outside of the study area), a similar geologic unit, or based on whether the unit in question was deposited in a type of environment that is known to be favorable for fossil preservation. Monitoring by experienced paleontologists greatly increases the probability that fossils will be discovered during ground-disturbing activities and that, if these remains are significant, successful mitigation and salvage efforts may be undertaken in order to prevent adverse impacts on these resources.

Regional

South Coast Air Quality Management District Rules and Regulations

Several SCAQMD rules, adopted to implement portions of the 2012 and 2016 air quality management plans, may apply to growth anticipated under the Project. In particular, growth anticipated under the Project may be subject to Rule 403 – Fugitive Dust, which requires projects to prevent, reduce or mitigate fugitive dust emissions from a site. Rule 403 restricts visible fugitive dust to a project property line, restricts the net PM10 emissions to less than 50 micrograms per cubic meter ($\mu\text{g}/\text{m}^3$) and restricts the tracking out of bulk materials onto public roads. Additionally, projects must utilize one or more of the best available control measures, which may include adding freeboard to haul vehicles, covering loose material on haul vehicles, watering, using chemical stabilizers and/or ceasing all activities.

LA County General Plan

These elements govern the SOI, as is it within unincorporated Los Angeles County.

Safety Element

The Safety Element addresses several potential hazards in Los Angeles County, including seismic and geologic hazards. Goals of this element are to prevent loss of life and reduce property damage as a result of natural disasters, and to minimize the effects of hazardous conditions. Policy Four supports efforts to retrofit masonry structures to help reduce the risk of structural and human loss in seismic hazards.

²⁴ Society of Vertebrate Paleontology, 2010. Standard Procedures for the Assessment and Mitigation of Adverse Impacts to Paleontological Resources. Online. https://vertpaleo.org/wpcontent/uploads/2021/01/SVP_Impact_Mitigation_Guidelines.pdf. Accessed October 2021.

Conservation and Natural Resources Element

The Conservation and Natural Resources Element of the County’s General Plan indicates that “Historic, cultural, and paleontological resources are an important part of Los Angeles County’s identity”. This element provides the following goal and policies for the treatment of paleontological resources, which would apply to unincorporated lands in the Planning Area:

Goal C/NR 14: Protected historic, cultural, and paleontological resources.

Policy C/NR 14.1: Mitigate all impacts from new development on or adjacent to historic, cultural, and paleontological resources to the greatest extent feasible.

Policy C/NR 14.2: Support an inter-jurisdictional collaborative system that protects and enhances historic, cultural, and paleontological resources.

Policy C/NR 14.5: Promote public awareness of historic, cultural, and paleontological resources.

Policy C/NR 14.6: Ensure proper notification and recovery processes are carried out for development on or near historic, cultural, and paleontological resources.

County of Los Angeles All-Hazard Mitigation Plan

County of Los Angeles All-Hazard Mitigation Plan was prepared to assess risks posed by natural hazards and to develop a mitigation action plan for reducing the risks in Unincorporated Los Angeles County. This plan provides the following policies to address seismic and geologic hazards, which would apply to unincorporated lands in the Planning Area:

Seismic Hazard

Policy S 1.3: Require developments to mitigate geologic hazards, such as soil instability and landslides, in hillside management areas through siting and development standards.

Policy S 1.4: Support the retrofitting of unreinforced masonry structures to help reduce the risk of structural and human loss due to seismic or geological hazards.

Local

City of Carson, Natural Hazards Mitigation Plan

The 2013 City of Carson (City) Natural Hazards Mitigation Plan (NHMP) is designed to protect citizens, critical facilities, infrastructure, private property, and the environment from natural hazards. The NHMP goals seek to: Protect life, environment, and property; increase public awareness of the risks of natural hazards; preserve, rehabilitate, and enhance natural systems; establish partnerships for implementation; and coordinate effective emergency services and emergency operations procedures.

Carson Municipal Code

The Carson Municipal Code includes regulatory requirements that would apply to geology and soils for new development under the General Plan. Article V, Sanitation and Health, Chapter 8, Storm Water and Urban Runoff Pollution Control, of the Carson Municipal Code, requires that the site for every planning priority project shall be designed to control pollutants, pollutant loads,

and runoff volume to the maximum extent feasible by minimizing impervious surface area and controlling runoff from impervious surfaces through infiltration, evapotranspiration, bioretention and/or rainfall harvest and use.

Article IX, Planning and Zoning, Chapter 2, Subdivision Regulations, of the Carson Municipal Code, requires project applications to submit a geological and/or soils report, if required by the City Engineer, prepared by a licensed geologist and/or registered civil engineer, stating the effect of geological or soil conditions on the proposed development. In addition, this provision allows the City to restrict development on lots subject to flood hazard, inundation, or geological hazard.

3.6.4 Project Impact Analysis

Thresholds of Significance and Methodology

Thresholds of Significance

Appendix G of the State CEQA Guidelines provides screening questions that address potential impacts related to a number of environmental issues. The CEQA guidelines provides that lead agencies may use the questions set forth in the Appendix G to assess the significance of a project's environmental effects, and the use of Appendix G as a significance threshold is routinely sanctioned by the courts (although such use is not mandatory). Based on the Appendix G questions regarding geology and soils, a project would have a significant impact if the project would:

- Threshold GEO-1:** Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury or death involving:
- i. Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault;
 - ii. Strong seismic ground shaking;
 - iii. Seismic-related ground failure, including liquefaction;
 - iv. Landslides;
- Threshold GEO-2:** Result in substantial soil erosion or the loss of topsoil;
- Threshold GEO-3:** Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse;
- Threshold GEO-4:** Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial direct or indirect risks to life or property;
- Threshold GEO-5:** Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature.

Methodology

Geologic and Seismic Hazards

This evaluation of geologic and seismic hazard conditions was completed using published geologic, soils, and seismic maps and studies from USGS, CGS, and Los Angeles County. In order to address potential hazards from earthquakes or other local geologic hazards, implementation of the Project would ensure that development will comply with local and state regulations, including the CBC and the Seismic Hazard Mapping Act.

Paleontological Resources

The analysis of paleontological resources is based on a review of the LACM paleontological records search results. The purpose of the records search is to determine whether there are previously recorded fossil localities or paleontologically sensitive formations within the Planning Area that require inclusion in the current analysis. The results also provide a basis for assessing the sensitivity of the Planning Area in regard to the potential for surface and subsurface paleontological resources to exist.

Project Impact Analysis

Risk of Geologic Hazards

Threshold GEO-1: The Project would have a significant impact if future development allowed by Carson2040 directly or indirectly causes potential substantial adverse effects, including the risk of loss, injury, or death involving: (i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault; (ii) Strong seismic ground shaking; (iii) Seismic-related ground failure, including liquefaction; or (iv) Landslides.

Impact GEO-1: *The Project would not directly or indirectly cause potential substantial adverse effects involving the risk of geologic hazards. (Less than Significant)*

Fault Rupture

As mapped in Figure 3.6-2 and noted in Section 3.6.2, *Environmental Setting*, the Avalon-Compton Fault and the corresponding Alquist-Priolo Fault Zone run through the northeastern part of the city. However, the potential for seismic hazards due to fault rupture in Carson is relatively low because of the limited presence of known faults in the Planning Area. Although there is a potential for greater damage from potential earthquakes in the greater Southern California region and exposure to seismic risks cannot be completely eliminated, the proposed Plan's policies adhere to state and local regulations, such as CBC requirements, to address these seismic hazards. Therefore, the impact related to fault rupture would be less than significant.

Ground Shaking

Earthquakes in and near the Planning Area have the potential to cause ground shaking of significant magnitude. If an earthquake were to occur, residents of Carson could expect to feel potential ground shaking at a Modified Mercalli intensity of VII, very strong shaking with

moderate damage,²⁵ with a chance of damage at two to five percent.²⁶ The Project would allow for additional development within the Planning Area, which could expose people and property to strong seismic ground shaking. However, all new buildings would be constructed in compliance with the CBC to resist the effects of earthquake motions. Additionally, the proposed General Plan policies listed below would address any potential impacts associated with strong seismic ground shaking. Therefore, the impact related to strong seismic ground shaking would be less than significant.

Liquefaction

Carson has several liquefaction hazard areas that are primarily located near water, primarily alluvial and former slough areas. A significant portion of the Planning Area has been designated as liquefaction hazard zones, as shown in Figure 3.6-2, and development in these areas requires a geotechnical investigation report as part of the environmental and building permit process. Proposed General Plan policies—such as Implementing Policy CSES-P-18, which requires that projects in areas of high liquefaction risk submit geotechnical investigation reports and demonstrate that the project conforms to all recommended mitigation measures prior to City approval—would address liquefaction potentials by ensuring that sensitive or potentially hazardous facilities are prepared for a liquefaction event. Therefore, the impact related to liquefaction would be less than significant.

Seismically Induced Landslides

Rapid erosion and landslides are most likely to occur on sloped areas. According to the California Geological Survey, the Planning Area does not contain any landslide hazard areas. Due to the relative absence of significant elevation changes in the city, slope instability is limited to the slopes adjacent to the flood control channels that intersect the city. The potential impacts from landslides on development of future land uses associated with the Project would be addressed through site-specific geotechnical studies prepared in accordance with CBC requirements and standard industry practices, as needed, which would specifically address landslide hazards. Development would conform to the current design provisions of the CBC to mitigate losses from landslides. Therefore, the impact related to seismically-induced landslides would be less than significant.

Proposed General Plan Policies that Address the Impact

Community Services, Education, and Safety

Guiding Policies

- | | |
|-----------|--|
| CSES-G-10 | Proactively minimize risk of seismic and geologic hazards to the property and lives of Carson residents, businesses, and visitors. |
| CSES-G-11 | Seek to reduce potential damage to property and repercussions from damaged heavy industrial facilities due to seismic hazards. |

²⁵ U.S. Geological Survey, 2016. USGS Forecast for Ground Shaking Intensity from Natural and Induced Earthquakes in 2016. Online. https://earthquake.usgs.gov/hazards/induced/images/MMI_2016.pdf. Accessed November 2017.

²⁶ U.S. Geological Survey, 2017. New USGS maps identify potential ground-shaking hazards in 2017 from both human-induced and natural earthquakes in the central and eastern U.S. Online.

Implementing Policies

- CSES-P-17 Maintain updated maps of known seismic and other geologic hazards such as fault lines to inform land use decisions and monitor the threat of future seismic activity to existing development, especially areas with heavy industrial uses or refineries.
- CSES-P-18 In areas of high liquefaction risk (see Carson General Plan 2040 Figure 7-4), require that project proponents submit geotechnical investigation reports and demonstration that the project conforms to all recommended mitigation measures prior to City approval. Ensure that sensitive or potentially hazardous facilities, such as refineries, heavy industrial, or former landfills, are prepared for a liquefaction event and designed to mitigate hazardous material releases.
- CSES-P-19 Given that a known fault line crosses SR-91, prepare for transportation and infrastructure impacts if a seismic event were to occur.
- CSES-P-20 Continue to enforce rules and regulations on designing buildings to the current seismic standards and ensure that erosion is controlled through drainage and grading plans and that all geotechnical design requirements for projects are adhered to.

Mitigation Measures

None required.

Soil Erosion or Loss of Topsoil

Threshold GEO-2: The Project would have a significant impact if future development allowed by Carson2040 would result in substantial soil erosion or the loss of topsoil.

Impact GEO-2: *The Project would not result in substantial soil erosion or the loss of topsoil. (Less than Significant)*

Development anticipated by the Project would likely include earthwork activities that could expose soils to the effects of erosion or loss of topsoil. Once disturbed, either through removal of vegetation, asphalt, or an entire structure, stockpiled soils can be exposed to the effects of wind and water if not managed properly. The Project includes policies, listed below, that require the use of best management practices (BMPs) to control soil erosion during and after ground-disturbing activities and geotechnical reports for projects requiring grading permits.

In addition, development that disturbs more than one acre would be subject to compliance with a NPDES permit. Compliance includes the implementation of BMPs, some of which are specifically implemented to reduce soil erosion or loss of topsoil, and the implementation of a storm water pollution prevention plan (SWPPP) through the local jurisdiction. BMPs that are required under a SWPPP include erosion prevention measures that have proven effective in limiting soil erosion and loss of topsoil. Generally, once construction is complete and exposed areas are revegetated or covered by buildings, asphalt, or concrete, the erosion hazard is substantially eliminated or reduced.

Therefore, the impact related to soil erosion and topsoil loss would be less than significant with implementation of the proposed General Plan policies below.

Proposed General Plan Policies that Address the Impact

Implementing Policy CSES-P-20 as discussed under Impact GEO-1, in addition to the following:

Open Space and Environmental Conservation

Implementing Policies

- OSEC-P-15 Continue working with the Los Angeles RWQCB in implementation of the National Pollutant Discharge Elimination System (NPDES) program. As part of the NPDES permitting process, require developments to incorporate structural and non-structural best management practices (BMPs) to mitigate or reduce the projected increases in pollutant loads. Do not allow post-development runoff from a site that would cause or contribute to an exceedance of receiving water quality objectives or has not been reduced to the maximum extent practicable.
- OSEC-P-16 Prepare and implement applicable plans such as a Water Quality Improvement Plan, Integrated Regional Water Management Plan, Load Reduction Plan or others as needed to comply with applicable regulations.

Mitigation Measures

None required.

Unstable Soils

Threshold GEO-3: The Project would have a significant impact if future development allowed by Carson2040 is located on a geologic unit or soil that is unstable as a result of development, and potentially results in on- or off-site landslide, lateral spreading, subsidence, liquefaction, or collapse.

Impact GEO-3: *The Project would not have a significant impact due to hazards associated with unstable soils, such as on- or off-site landslide, lateral spreading, subsidence, liquefaction, or collapse. (Less than Significant)*

Some development allowed under the proposed General Plan update could be located on geologic units or soils that are unstable, or that could become unstable, and result in geologic hazards if not addressed appropriately. Areas with underlying materials that include undocumented fills, soft compressible deposits, or loose debris could be inadequate to support

development, especially multi-story buildings. Soils that exhibit expansive properties when exposed to varying moisture content over time could result in damage to foundations, walls, or other improvements. Structures, including residential units and commercial buildings, could be damaged as a result of settlement or differential settlement where structures are underlain by materials of varying engineering characteristics.

Construction of new structures in the vicinity of relatively steep slopes could provide additional loading causing landslides or slope failure from unstable soils or geologic units. Slope failure can

occur naturally through rainfall or seismic activity, or through earthwork and grading related activities. However, there is a relative absence of significant elevation changes within Carson city limits.

The potential hazards of unstable soil or geologic units would be addressed largely through the integration of geotechnical information in the planning and design process for projects to determine the local soil suitability for specific projects in accordance with standard industry practices and state-provided requirements, such as CBC requirements that are used to minimize the risk associated with these hazards. Geotechnical investigations would be required to thoroughly evaluate site-specific geotechnical characteristics of subsurface soils and bedrock to assess potential hazards and recommend site preparation and design measures to address any hazards which may be present. These measures are enforced through compliance with the CBC to address hazards relating to unstable soils and slope failure. Furthermore, policies included the proposed General Plan update would address risk of exposure to geological hazards, including lateral spreading and landslide, by mandating site-specific geotechnical investigation and mitigation prior to development, and continually upgrading the City's geotechnical standards. For these reasons, the impact related to hazards associated with unstable soils, such as landslide, lateral spreading, subsidence, liquefaction, or collapse, would be less than significant.

Proposed General Plan Policies that Address the Impact

Guiding Policies CSES-G-10 and CSES-G-11, and Implementing Policies CSES-P-17, CSES-P-18, CSES-P-19, and CSES-P-20, as discussed under Impact GEO-1.

Mitigation Measures

None required.

Expansive Soils

Threshold GEO-4: The Project would have a significant impact if future development allowed by Carson2040 is located on expansive soil, as defined in Table 1-B of the Uniform Building Code, creating substantial direct or indirect risks to life or property.

Impact GEO-4: *The Project would not create substantial direct or indirect risks to life or property due to the presence of expansive soils. (Less than Significant)*

Soils that exhibit expansive properties when exposed to varying moisture content over time could result in damage to foundations, walls, or other improvements. Soils within the city of Carson generally have low to moderate shrink-swell potential, except for the Ramona clay loam, which has a high potential. Thus, development associated with the Project could include development occurring on soils considered to be expansive.

The potential hazards of expansive soils would be addressed largely through the integration of geotechnical information in the planning and design process for projects to determine the local soil suitability for specific projects in accordance with standard industry practices and state-provided requirements, such as CBC requirements that regulate the analysis of expansive soils. Geotechnical investigations would be required to thoroughly evaluate site-specific geotechnical

characteristics of subsurface soils to assess potential hazards and recommend site preparation and design measures to address any hazards which may be present. These measures are enforced through compliance with the CBC to address hazards relating to unstable soils.

Furthermore, policies include in the proposed General Plan update would address risk of exposure to geological hazards, including expansive soils, by mandating site-specific geotechnical investigation and mitigation prior to development, and continually upgrading the City's geotechnical reporting standards.

For these reasons, the impact related to hazards associated with expansive soils would be less than significant.

Proposed General Plan Policies that Address the Impact

Guiding Policies CSES-G-10 and CSES-G-11, and Implementing Policies CSES-P-17, CSES-P-18, CSES-P-19, and CSES-P-20, as discussed under Impact GEO-1.

Mitigation Measures

None required.

Paleontological Resources

Threshold GEO-5: The Project would have a significant impact if future development allowed by Carson2040 would directly or indirectly destroy a unique paleontological resource or site or unique geologic feature.

Impact GEO-5: *The Project would not directly or indirectly destroy a unique paleontological resource or site or unique geologic feature. (Less than Significant)*

Future development proposals initiated under the proposed General Plan update that include construction-related ground disturbance (e.g., grubbing/clearing, grading, excavation, trenching, and boring) into previously undisturbed soils are activities that have potential to destroy paleontological resources. Future development that does not require ground-disturbing activities would cause no impacts on paleontological resources. Other development activities that include ground disturbance of heavily disturbed soils or engineered artificial fill would also cause no impact on significant paleontological resources since they have likely been displaced from previous disturbances (such as the original/previous construction), and there is very-limited to no potential to encounter intact and significant resources in disturbed soils. However, intact significant resources may be encountered beneath the depth of previous disturbances or in pockets of undisturbed soils within existing developments.

Anticipated development in the Planning Area would occur through infill development on vacant property, and through redevelopment or revitalization of underutilized properties, which could result in damage to paleontological resources located at or near previously undisturbed ground surfaces as result of construction-related ground disturbance. In addition, infrastructure and other improvements requiring ground disturbance could result in damage to or destruction of paleontological resources buried below the ground surface.

As previously discussed, the LACM has indicated that seven vertebrate localities from older Quaternary deposits have been recorded within the boundaries of the city and that several other localities from the same sedimentary deposits occur nearby. These fossil localities have yielded specimens of mammoth, camel, ray and dolphin at unknown depths and depths between 8 and 30 feet below surface. The LACM has also mentioned that grading or shallow excavations in the upper feet of the old lagoonal deposits (located at the surface in the northwest portion of the city) or the younger Quaternary Alluvium deposits (found in the central and eastern portions of the city) are unlikely to uncover fossil vertebrate remains. However, deeper excavations in the city reaching down into older Quaternary deposits, as well as excavations in older Quaternary deposits found at the surface have the potential for producing vertebrate fossils. Significant or unique paleontological resources have the potential to contribute to the geological and paleontological record of the region and may be of scientific importance to researchers. Any project that proposes ground disturbance could result in a significant impact on unique paleontological resources.

The General Plan policies listed below would help address the impact by requiring that project-specific paleontological studies be conducted for all future development that includes ground disturbance in previously undisturbed soils. Project-specific paleontological studies would include a site-specific database search through the LACM and/or other appropriate facilities; geologic map and scientific literature review; a pedestrian field survey (if deemed appropriate by the qualified professional paleontologist); assessment of the project area's paleontological sensitivity and paleontological monitoring requirements; and preparation of a technical report that documents the methods and results of the study. This paleontological study shall be prepared during the CEQA planning process (i.e., prior to construction). The City would incorporate the recommendations from this study as mitigation measures to ensure that impacts on paleontological resources are mitigated to the extent possible if the recommendations differ from Policy OSEC-P-13, which requires paleontological construction monitoring. However, if the recommendation is paleontological construction monitoring, then the City would incorporate Policy OSEC-P-13 as a project condition of approval. Therefore, the impact related to unique paleontological resources would be less than significant with adherence to proposed General Plan policies.

Proposed General Plan Policies that Address the Impact

Open Space and Environmental Conservation

Guiding Policies

OSEC-G-6 Identify, protect, and preserve important archaeological, paleontological, tribal, and historic resources for their aesthetic, scientific, educational, and cultural values.

Implementing Policies

OSEC-P-12 Prior to development of projects that involve ground disturbance or excavations in undisturbed native soils, the project proponent shall retain a paleontologist meeting the Society of Vertebrate Paleontology's standards for qualified professional paleontologist to conduct a paleontological resources assessment including: a site-specific database search at the Natural History Museum of Los Angeles County and/or other appropriate facilities; geologic map and scientific literature review; a pedestrian field survey, where deemed

appropriate by the qualified professional paleontologist; assessment of the project area's paleontological sensitivity and paleontological monitoring requirements; and preparation of a technical report that documents the methods and results of the study. The report shall be prepared prior to the City of Carson's approval of project plans.

- OSEC-P-13 The City shall require paleontological resources monitoring for any project that has a high potential for encountering subsurface paleontological resources. The location, depths, duration, and timing of monitoring shall be determined by the qualified professional paleontologist based on the sensitivity assessment required as part of OSEC-P-12. Prior to the start of ground disturbance, the project proponent shall retain a qualified monitor meeting the Society of paleontological resource monitors, and who shall work under the direct supervision of the qualified professional paleontologist. In the event that paleontological resources are unearthed during ground-disturbing activities, the monitor shall be empowered to halt or redirect ground-disturbing activities away from the vicinity of the discovery until the qualified professional paleontologist has determined its significance and provided recommendations for preservation in place or recovery of the resource. The monitor shall keep daily logs detailing the types of activities and soils observed, and any discoveries. After cessation of ground disturbance, the qualified professional paleontologist shall prepare a report that details the results of monitoring.

Mitigation Measures

None required.

3.6.5 Cumulative Impact Analysis

The geographic context for the analysis of impacts related to geology and soils is generally site-specific, rather than cumulative in nature, because each development site has unique geologic considerations that would be subject to uniform site development and construction standards. In this way, potential cumulative impacts relating to geology and soils would be minimized on a site-by-site basis to the extent that modern construction methods and code requirements are followed. Therefore, future development in the South Bay region of southern Los Angeles County, including growth anticipated under the proposed General Plan update, would not result in a significant cumulative impact with respect to geology and soils.

The cumulative context for paleontological resources is the Los Angeles Basin. Development in the basin, including development in Carson, has resulted in the disturbance land across almost the entire region, thus resulting in the disturbance of unknown paleontological resources. It is reasonable to assume that present and future development activities in the region will continue to uncover unknown paleontological resources, and thus the cumulative impact of future development in the region on this resource would be potentially significant. The Planning Area has a low- to high-potential for paleontological resources, and significant fossil discoveries have occurred within the Planning Area in the past. Future development projects anticipated by the Project may involve grading, excavation, or other ground-disturbing activities, which could destroy unknown paleontological resources. However, with the implementation of proposed General Plan policies, as well as applicable local, state, and federal laws, the contribution of the Project to this cumulative impact would not be cumulatively considerable.

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3.7 Greenhouse Gas Emissions

3.7.1 Introduction

This section assesses potential environmental impacts related to greenhouse gas (GHG) emissions from future development allowed under the Project. This section describes the existing GHG emissions and sources of GHGs in the Planning Area as well as the relevant federal, state, and local regulations and programs. Energy usage is evaluated in Section 3.5, *Energy*, of this Draft EIR.

Comments received in response to the Notice of Preparation (NOP) and Recirculated NOP regarding topics covered in this section include the following:

- The California Department of Transportation (Caltrans) commented that the environmental report should ensure all modes are served well by planning and development activities including reducing single occupancy vehicle trips, reducing vehicle miles traveled, and reducing greenhouse gas emissions.
- The South Coast Air Quality Management District (SCAQMD) recommended that the Lead Agency use the SCAQMD's CEQA Air Quality Handbook and website as guidance when preparing the air quality and GHG analyses. The SCAQMD also requested that all appendices and technical documents related to GHG emissions and electronic versions of emission calculation spreadsheets be provided to SCAQMD staff.
- The Southwest Regional Council of Carpenters commented that local hire provisions requiring that a certain percentage of workers reside within 10 miles or less of the Planning Area can reduce the length of vendor trips, reduce greenhouse gas emissions and providing localized economic benefits. The Southwest Regional Council of Carpenters commented that the City of Carson (City) should require the Project to be built to standards exceeding the current 2019 California Green Building Code and 2020 County of Los Angeles Green Building Standards Code to mitigate the Project's environmental impacts and to advance progress towards the State of California's environmental goals.

3.7.2 Environmental Setting

Regional Context

Global climate change refers to changes in average climatic conditions on Earth as a whole, including changes in temperature, wind patterns, precipitation and storms. Historical records indicate that global climate changes have occurred in the past due to natural phenomena; however, current data increasingly indicate that the current global conditions differ from past climate changes in rate and magnitude. Global climate change attributable to anthropogenic (human) GHG emissions is currently one of the most important and widely debated scientific, economic and political issues in the United States and the world as a whole. The extent to which increased concentrations of GHGs have caused or will cause climate change and the appropriate actions to limit and/or respond to climate change are the subject of significant and rapidly evolving regulatory efforts at the federal and state levels of government.

GHGs are those compounds in the Earth's atmosphere that play a critical role in determining temperature near the Earth's surface. More specifically, these gases allow high-frequency shortwave solar radiation to enter the Earth's atmosphere, but retain some of the low frequency infrared energy, which is radiated back from the Earth towards space, resulting in a warming of the atmosphere. Not all GHGs possess the same ability to induce climate change; as a result, GHG contributions are commonly quantified in the units of equivalent mass of carbon dioxide (CO₂e). Mass emissions are calculated by converting pollutant specific emissions to CO₂e emissions by applying the proper global warming potential (GWP) value. These GWP ratios are available from the Intergovernmental Panel on Climate Change (IPCC). Historically, GHG emission inventories have been calculated using the GWPs from the IPCC's Second Assessment Report (SAR). The IPCC updated the GWP values based on the science in its Fourth Assessment Report (AR4).^{1,2} The California Air Resources Board (CARB) reports GHG emission inventories for California using the GWP values from the IPCC AR4. Although the IPCC has released its Fifth Assessment Report (AR5) with updated GWPs, CARB reports the statewide GHG inventory using the AR4 GWPs, which is consistent with international reporting standards. Therefore, the analysis in this EIR reflects the GWP values from IPCC AR4. Compounds that are regulated as GHGs are discussed below.³

Carbon Dioxide (CO₂): CO₂ is the most abundant GHG in the atmosphere and is primarily generated from fossil fuel combustion from stationary and mobile sources. CO₂ is the reference gas (GWP of 1) for determining the GWPs of other GHGs.⁴

Methane (CH₄): CH₄ is emitted from biogenic sources (i.e., resulting from the activity of living organisms), incomplete combustion in forest fires, landfills, manure management, and leaks in natural gas pipelines. The GWP of CH₄ is 21 in the IPCC SAR and 25 in the IPCC AR4.⁵

Nitrous Oxide (N₂O): N₂O produced by human-related sources including agricultural soil management, animal manure management, sewage treatment, mobile and stationary combustion of fossil fuel, adipic acid production, and nitric acid production. The GWP of N₂O is 310 in the IPCC SAR and 298 in the IPCC AR4.⁶

Hydrofluorocarbons (HFCs): HFCs are fluorinated compounds consisting of hydrogen, carbon, and fluorine. They are typically used as refrigerants in both stationary refrigeration and mobile air conditioning systems. The GWP of HFCs ranges from 140 for HFC-152a to 11,700 for HFC-23 in the IPCC SAR and 124 for HFC-152a to 14,800 for HFC-23 in the IPCC AR4.⁷

Nitrogen Trifluoride (NF₃): NF₃ is an inorganic, non-flammable, non-toxic odorless gas. NF₃ is used as an oxidizer of high energy fuels, for the preparation of tetrafluorohydrazine, as a fluorine

¹ Intergovernmental Panel on Climate Change (IPCC), *Fourth Assessment Report, Working Group I Report: The Physical Science Basis*, 2007.

² IPCC, *Second Assessment Report, Working Group I: The Science of Climate Change*, 1995.

³ IPCC, *Fourth Assessment Report, Working Group I Report: The Physical Science Basis*, 2007.

⁴ IPCC, *Fourth Assessment Report, Working Group I Report: The Physical Science Basis*, 2007.

⁵ IPCC, *Fourth Assessment Report, Working Group I Report: The Physical Science Basis*, 2007.

⁶ IPCC, *Fourth Assessment Report, Working Group I Report: The Physical Science Basis*, 2007.

⁷ IPCC, *Fourth Assessment Report, Working Group I Report: The Physical Science Basis*, 2007.

source in high power chemical lasers, in semi-conductor manufacturing, and as an etchant gas in the electronic industry. The GWP of NF_3 is 17,200 in the IPCC AR4.⁸

Perfluorocarbons (PFCs): PFCs are fluorinated compounds consisting of carbon and fluorine. They are primarily created as a byproduct of aluminum production and semiconductor manufacturing. The GWPs of PFCs range from 6,500 to 9,200 in the IPCC SAR and 7,390 to 17,700 in the IPCC AR4.⁹

Sulfur Hexafluoride (SF_6): SF_6 is a fluorinated compound consisting of sulfur and fluoride. It is a colorless, odorless, nontoxic, nonflammable gas. It is most commonly used as an electrical insulator in high voltage equipment that transmits and distributes electricity. SF_6 has a GWP of 23,900 in the IPCC SAR and 22,800 in the IPCC AR4.¹⁰

Existing Statewide Greenhouse Gas Emissions

CARB compiles GHG inventories for California. Based on the year 2019 GHG inventory data (the latest year for which data are available), California emitted 418.2 million metric tons of CO_2e (MMT CO_2e) which includes emissions resulting from imported electrical power.¹¹ Between 1990 and 2019, the population of California grew by approximately 33 percent (from 29.8 to 39.6 million).¹²⁻¹³ In addition, the California economy, measured as gross state product, grew from approximately \$733 billion in 1990 to \$3.1 trillion in 2019, representing an increase of approximately four times the 1990 gross state product.¹⁴ Despite the population and economic growth, California's net GHG emissions were reduced to below 1990 levels in 2016 and has continued to decline. According to CARB, the declining trend coupled with the state's GHG reduction programs (such as the Renewables Portfolio Standard [RPS], Low Carbon Fuel Standard [LCFS], vehicle efficiency standards, and declining caps under the Cap-and-Trade Program) demonstrate that California is on track to meet the 2030 GHG reduction target of 40 percent below 1990 levels codified in Executive Order B-30-15. **Table 3.7 1, *State of California Greenhouse Gas Emissions***, identifies and quantifies statewide anthropogenic GHG emissions and sinks (e.g., carbon sequestration due to forest growth) in 1990 and 2019 (i.e., the most recent year in which data are available from CARB). As shown in Table 3.7 1 Table 3.7-1, the transportation sector is the largest contributor to statewide GHG emissions at approximately 40 percent in 2019.

⁸ IPCC, 2007, *Fourth Assessment Report, Working Group I Report: The Physical Science Basis*.

⁹ IPCC, *Fourth Assessment Report, Working Group I Report: The Physical Science Basis*.

¹⁰ IPCC, *Fourth Assessment Report, Working Group I Report: The Physical Science Basis*.

¹¹ California Air Resources Board (CARB), 2021a, Current California GHG Emission Inventory Data – 2000–2019 GHG Inventory (2021 Edition). <https://ww2.arb.ca.gov/ghg-inventory-data>.

¹² U.S. Census Bureau, National and State Population Estimates: 1990–1994, 1995; 2019 National and State Population Estimates.

¹³ California Department of Finance, 2021, E-5 Population and Housing Estimates for Cities, Counties, and the State, 2011–2021 with 2010 Census Benchmark. https://www.dof.ca.gov/Forecasting/Demographics/Estimates/E-5/documents/E-5_2021_InternetVersion.xlsx, accessed November 3, 2021.

¹⁴ California Department of Finance, 2020, Gross State Product in California, https://www.dof.ca.gov/Forecasting/Economics/Indicators/Gross_State_Product/documents/CA_GDP.xlsx, accessed November 3, 2021. Amounts are based on current dollars as of the date of the report (April 2020).

**TABLE 3.7-1
 STATE OF CALIFORNIA GREENHOUSE GAS EMISSIONS**

Category	Total 1990 Emissions using IPCC SAR (MMTCO ₂ e)	Percent of Total 1990 Emissions	Total 2019 Emissions using IPCC AR4 (MMTCO ₂ e)	Percent of Total 2019 Emissions
Transportation	150.7	35%	166.1	40%
Electric Power	110.6	26%	58.8	15%
Commercial	14.4	3%	28.0	4%
Residential	29.7	7%	15.9	7%
Industrial	103.0	24%	88.2	21%
Recycling and Waste ^a	—	—	8.9	2%
High GWP/Non-Specified ^b	1.3	<1%	20.6	5%
Agriculture/Forestry	23.6	6%	31.8	8%
Forestry Sinks	-6.7	—	— ^c	—
Net Total (IPCC SAR)	426.6	100%	—	—
Net Total (IPCC AR4)^d	431	100%	418.2	100%

NOTES: IPCC = Intergovernmental Panel on Climate Change; SAR = Second Assessment Report; AR4 = Fourth Assessment Report; MMTCO₂e = million metric tons of carbon dioxide equivalent; GWP = global warming potential

Totals may not add up exactly due to rounding.

^a Included in other categories for the 1990 emissions inventory.

^b High GWP gases are not specifically called out in the 1990 emissions inventory.

^c Revised methodology under development (not reported for 2019).

^d CARB revised the state's 1990 level GHG emissions using GWPs from the IPCC AR4.

SOURCE: California Air Resources Board, 2021b, California Greenhouse Gas Emissions for 2000 to 2019 (2021 Edition). Trends of Emissions and Other Indicators. July 28, 2021. ghg_inventory_trends_00-19.pdf (ca.gov).

Urban Heat Island

According to the California Environmental Protection Agency (CalEPA), the urban heat island effect refers to large, urbanized areas that experience higher temperatures, greater pollution and more negative health impacts during hot summer months when compared to more rural communities.¹⁵ Heat islands are created by a combination of heat-absorptive surfaces (such as dark pavement and roofing), heat-generating activities (such as engines and generators) and the absence of vegetation (which provides evaporative cooling). Daytime temperatures in urban areas are on average 1 to 6 degrees Fahrenheit (F) higher than in rural areas, while nighttime temperatures can be as much as 22 degrees F higher as the heat is gradually released from buildings and pavement.¹⁶ Assembly Bill (AB) 296 (Chapter 667, Statutes of 2012) required that CalEPA develop an Urban Heat Island Index (UHII) to quantify the extent and severity of an urban heat island for individual cities to map where and how intensely they manifest at a local

¹⁵ California Environmental Protection Agency (CalEPA), 2021, Understanding the Urban Heat Island Index, <https://calepa.ca.gov/climate/urban-heat-island-index-for-california/understanding-the-urban-heat-island-index/>, accessed June 2021.

¹⁶ CalEPA, 2021, Understanding the Urban Heat Island Index, <https://calepa.ca.gov/climate/urban-heat-island-index-for-california/understanding-the-urban-heat-island-index/>, accessed June 2021.

scale.¹⁷ In 2015, CalEPA released maps that show the scientifically assigned UHII scores based on atmospheric modeling for each census tract in and around most urban areas throughout the state. The urban area in which the city of Carson is located has an approximate UHII range of 2001 to 8000 degree-hours per 182 days or 11 to 44 degree-hours per day (Celsius scale).¹⁸ The UHII range is equivalent to an average temperature difference between rural and urban areas of approximately 0.8 to 3.3 degrees F.¹⁹ It is important to note that the UHII does not measure the temperatures of an area, but rather it measures the average temperature difference between rural and urban areas within a region.

Effects of Global Climate Change

The scientific community's understanding of the fundamental processes responsible for global climate change has improved over the past decade, and its predictive capabilities are advancing. However, there remain significant scientific uncertainties, for example, in predictions of local effects of climate change, occurrence, frequency, and magnitude of extreme weather events, effects of aerosols, changes in clouds, shifts in the intensity and distribution of precipitation, and changes in oceanic circulation. Due to the complexity of the Earth's climate system and inability to accurately model it, the uncertainty surrounding climate change may never be completely eliminated. Nonetheless, the IPCC's *Fifth Assessment Report: Summary for Policy Makers* (dated 2013) states that, "it is *extremely likely* that more than half of the observed increase in global average surface temperature from 1951 to 2010 was caused by the anthropogenic increase in GHG concentrations and other anthropogenic forces [sic] together."²⁰ In addition, a report from the National Academy of Sciences published in 2010 concluded that 97 to 98 percent of the climate researchers most actively publishing in the field support the tenets of the IPCC in that climate change is very likely caused by human (i.e., anthropogenic) activity.²¹

According to the California EPA, the potential impacts in California due to global climate change may include: loss in snow pack; sea level rise; more extreme heat days per year; more high ozone days; more frequent and a greater spatial extent of forest fires; more drought years; increased erosion of California's coastlines and sea water intrusion into the Sacramento and San Joaquin Deltas and associated levee systems; and increased pest infestation.²² The California Energy Commission (CEC) has a geospatial data tool (Cal-Adapt) that provides a view of how the state could be impacted by climate change. Below is a summary of some of the potential climate

¹⁷ CalEPA, 2021, Understanding the Urban Heat Island Index, <https://calepa.ca.gov/climate/urban-heat-island-index-for-california/understanding-the-urban-heat-island-index/>, accessed June 2021.

¹⁸ CalEPA, 2021, Understanding the Urban Heat Island Index, Appendix C, Figure C41. According to CalEPA, the degree-hour combines both the intensity of the heat and the duration of the heat into a single numerical measure.

¹⁹ According to CalEPA, to perform an approximate conversion to a total number of degrees Fahrenheit per day, divide the Index by 24 hours and multiply the result by 1.8 degrees. For example, if the Index is 44 degree-hours per day, then the approximate average temperature difference between rural and urban in that area is 3.3 degrees F (i.e., $44 / 24 * 1.8 = 3.3$).

²⁰ IPCC, 2013, *Fifth Assessment Report, Summary for Policy Makers*, page 5.

²¹ Anderegg, William R. L., J.W. Prall, J. Harold, S.H. Schneider, 2010, *Expert Credibility in Climate Change, Proceedings of the National Academy of Sciences of the United States of America*, 107:12107–12109.

²² CalEPA, 2006, Climate Action Team, *Climate Action Team Report to Governor Schwarzenegger and the Legislature*.

change effects and relevant Cal-Adapt data, reported by an array of studies that could be experienced in California as a result of global warming and climate change.

Air Quality

Higher temperatures have been determined to be conducive to air pollution formation and, therefore, could worsen air quality in California. Climate change may increase the concentration of ground-level ozone; however, the magnitude of the effect is uncertain. If higher temperatures resulting from climate change are accompanied by drier conditions, the potential for large wildfires could increase within the Los Angeles region, which, in turn, would further worsen air quality. However, if higher temperatures resulting from climate change are accompanied by wetter, rather than drier conditions, the rains would tend to temporarily clear the air of particulate pollution and reduce the incidence of large wildfires, thus ameliorating some of the pollution associated with wildfires, although it would not eliminate all effects of increased temperatures. Additionally, severe heat accompanied by drier conditions and poor air quality could increase the number of heat-related deaths, illnesses, and asthma attacks throughout the state.²³ In 2018, the California Natural Resources Agency (CNRA) published the Safeguarding California Plan: 2018 Update, as a continuation of the policy vision in the Governor’s Executive Order S-13-2008 and the 2009 CNRA California Climate Adaptation Strategy.²⁴ The CNRA plan lists specific actions and recommendations for state and local agencies to best adapt to the anticipated risks posed by a changing climate. In accordance with the 2009 CNRA California Climate Adaptation Strategy, the CEC developed the Cal-Adapt website, which became operational in 2011, that synthesizes climate change scenarios and impacts to benefit local decision makers.^{25,26} As stated in the CNRA Safeguarding California Plan: 2018 Update, “the Cal-Adapt.org web portal is at the forefront of resources for specific communities to understand how climate change will raise temperatures and exacerbate extreme heat events, drought, snowpack loss, wildfire, and coastal flooding.” The information provided on the Cal-Adapt website represents a projection of potential future climate scenarios. The data are comprised of the average values (i.e., temperature, sea-level rise, snowpack) from a variety of scenarios and models and are meant to illustrate how the climate may change based on a variety of different potential social and economic factors.

Water Supply

Uncertainty remains with respect to the overall impact of global climate change on future water supplies in California. Studies have found that, “Considerable uncertainty about precise impacts of climate change on California hydrology and water resources will remain until we have more precise and consistent information about how precipitation patterns, timing, and intensity will change.”²⁷ For example, some studies identify little change in total annual precipitation in

²³ California Energy Commission (CEC), 2006, *Scenarios of Climate Change in California: An Overview*, February 2006.

²⁴ California Natural Resources Agency (CNRA), 2018, *2018 Safeguarding California Plan: 2018 Update, California’s Climate Adaptation Strategy*, January 2018.

²⁵ CNRA, 2009a, *2009 California Climate Adaptation Strategy: A Report to the Governor of the State of California in Response to Executive Order S-13-2008*.

²⁶ The Cal-Adapt website address is: <http://cal-adapt.org>.

²⁷ Pacific Institute for Studies in Development, Environment and Security, 2003, *Climate Change and California Water Resources: A Survey and Summary of the Literature*, July 2003.

projections for California while others show significantly more precipitation.²⁸ Warmer, wetter winters would increase the amount of runoff available for groundwater recharge; however, this additional runoff would occur at a time when some basins are either being recharged at their maximum capacity or are already full.²⁹ Conversely, reductions in spring runoff and higher evapotranspiration because of higher temperatures could reduce the amount of water available for recharge.³⁰

The California Department of Water Resources (CDWR) report dated 2006 on climate change and effects on the State Water Project (SWP), the Central Valley Project, and the Sacramento-San Joaquin Delta, concluded that “climate change will likely have a significant effect on California’s future water resources...[and] future water demand.” It also reported that “much uncertainty about future water demand [remains], especially [for] those aspects of future demand that will be directly affected by climate change and warming. While climate change is expected to continue through at least the end of this century, the magnitude and, in some cases, the nature of future changes is uncertain.” It also reported that the relationship between climate change and its potential effect on water demand is not well understood, but “[i]t is unlikely that this level of uncertainty will diminish significantly in the foreseeable future.” Still, changes in water supply are expected to occur, and many regional studies have shown that large changes in the reliability of water yields from reservoirs could result from only small changes in inflows.³¹ In its Fifth Assessment Report, the IPCC states “Changes in the global water cycle in response to the warming over the 21st century will not be uniform. The contrast in precipitation between wet and dry regions and between wet and dry seasons will increase, although there may be regional exceptions.”³²

Hydrology and Sea Level Rise

As discussed above, climate changes could potentially affect the amount of snowfall, rainfall and snow pack; the intensity and frequency of storms; flood hydrographs (flash floods, rain or snow events, coincidental high tide and high runoff events); sea level rise and coastal flooding; coastal erosion; and the potential for salt water intrusion. Sea level rise can be a product of global warming through two main processes: expansion of seawater as the oceans warm, and melting of ice over land. A rise in sea levels could result in coastal flooding and erosion and could jeopardize California’s water supply, and increased storm intensity and frequency could affect the ability of flood-control facilities, including levees, to handle storm events.

Agriculture

California has a \$30 billion agricultural industry that produces one half of the country’s fruits and vegetables. Higher CO₂ levels can stimulate plant production and increase plant water-use

²⁸ Pacific Institute for Studies in Development, Environment and Security, 2003, *Climate Change and California Water Resources: A Survey and Summary of the Literature*, July 2003.

²⁹ Pacific Institute for Studies in Development, Environment and Security, 2003, *Climate Change and California Water Resources: A Survey and Summary of the Literature*, July 2003.

³⁰ Pacific Institute for Studies in Development, Environment and Security, 2003, *Climate Change and California Water Resources: A Survey and Summary of the Literature*, July 2003.

³¹ California Department of Water Resources, 2006, *Climate Change Report, Progress on Incorporating Climate Change into Planning and Management of California’s Water Resources*, page 2-75.

³² IPCC, , 2013 *Fifth Assessment Report, Summary for Policy Makers*.

efficiency. However, if temperatures rise and drier conditions prevail, water demand could increase. Crop-yield could be threatened by a less reliable water supply. Also, greater ozone pollution could render plants more susceptible to pest and disease outbreaks. In addition, temperature increases could change the time of year crops are harvested, and thus affect their quality.³³

Ecosystems and Wildlife

Increases in global temperatures and the potential resulting changes in weather patterns could have ecological effects on a global and local scale. Increasing concentrations of GHGs are likely to accelerate the rate of climate change. Scientists expect that the average global surface temperature could rise by 2 to 11.5°F (1.1 to 6.4°C) by 2100, with significant regional variation.³⁴ With increases in global temperatures, soil moisture is likely to decline in many regions, and intense rainstorms are likely to become more frequent. Sea level could rise as much as 2 feet along most of the U.S. coastline. Rising temperatures could have four major impacts on plants and animals: (1) timing of ecological events; (2) geographic range; (3) species' composition within communities; and (4) ecosystem processes such as carbon cycling and storage.^{35,36}

Existing Conditions

The city of Carson is a mix of residential, commercial, retail, office, industrial, school, recreational, and open space land uses. Everyday operational activities at these residences and businesses result in the emission of air pollutants associated with vehicle trips, landscaping equipment, on-site combustion of natural gas for heating and cooking, and fugitive emissions of VOCs from the use of aerosol products and coatings and landscaping. However, data with respect to the exact activity level (i.e., utility consumption, trip generation) and building energy standards for each residential or business use is not obtainable. Therefore, existing emissions estimates are based generally on default parameters in the California Emissions Estimator (CalEEMod) for area and building energy source emissions, except for applying the historical data option for operational building energy demand, which adjusts building energy demand to the 2005 standards which were in effect when CARB developed its Scoping Plan 2020 No Action Taken predictions, assuming no wood stoves and no fireplaces in multi-family residential units, and assuming a municipal solid waste diversion rate of 50 percent in compliance with AB 939 and SB 1016 (refer to Section 3.17, *Utilities and Service Systems*, of this Draft EIR, for additional information regarding AB 939 and SB 1016). Since CalEEMod defaults are relied upon, sources of GHG emissions not generally accounted for in CalEEMod defaults are not included, which could include sources such as commercial and industrial facility specific equipment such as industrial boilers, generators, and process equipment. Thus, the estimated existing GHG emissions presented below may be less than actual. Existing emissions for mobile sources are based on vehicle miles traveled (VMT) (provided by Fehr & Peers) and on-road mobile source emission

³³ California Climate Change Center, 2006, *Our Changing Climate: Assessing the Risks to California*.

³⁴ National Research Council, 2010, *Advancing the Science of Climate Change*.

³⁵ Parmesan, C. , 2004, *Ecological and Evolutionary Response to Recent Climate Change*.

³⁶ Parmesan, C., and H. Galbraith, 2004, *Observed Ecological Impacts of Climate Change in North America*. Arlington, VA: Pew. Cent. Glob. Clim. Change.

factors from the CARB on-road vehicle emissions factors (EMFAC2021) model. **Table 3.7-2, *Estimated Existing Regional Operational Emissions***, presents the regional emissions from the existing development in the city of Carson.

**TABLE 3.7-2
 ESTIMATED EXISTING REGIONAL OPERATIONAL EMISSIONS (2016)^{1,2}**

Source	MTCO ₂ e
Area	6,621
Energy	273,874
Solid Waste	17,597
Water Conveyance and Water Treatment	51,183
Mobile	648,319
Total Net MTCO₂e	997,594

NOTES: MTCO₂e = metric tons of carbon dioxide equivalent

¹ Detailed calculations are provided in Appendix D of this Draft EIR.

² Totals may not add up due to rounding of decimals.

SOURCE: Prepared by Environmental Science Associates based on Appendix D.

3.7.3 Regulatory Framework

This section provides the relevant federal, state, regional, and local regulations applicable to the Project.

Federal

The federal government administers a wide array of programs to address the GHG generated in the U.S. These programs focus on energy efficiency, renewable energy, methane and other non-CO₂ GHGs, agricultural practices, and implementation of technologies to achieve GHG reductions. At the federal level, the United States Environmental Protection Agency (EPA) is responsible for implementing federal policy to address GHGs. The EPA implements numerous voluntary programs that contribute to the reduction of GHG emissions. These programs (e.g., the ENERGY STAR labeling system for energy-efficient products) play a significant role in encouraging voluntary GHG reductions from large corporations, consumers, industrial and commercial buildings, and many major industrial sectors.

In *Massachusetts v. Environmental Protection Agency* (Docket No. 05–1120), the U.S. Supreme Court held in 2007 that EPA has statutory authority under Section 202 of the Clean Air Act (CAA) to regulate GHGs. The Court did not hold that the EPA was required to regulate GHG emissions; however, it indicated that the agency must decide whether GHGs cause or contribute to air pollution that is reasonably anticipated to endanger public health or welfare.

In response to the *Massachusetts v. Environmental Protection Agency* ruling, President Bush signed Executive Order 13432 on May 14, 2007, directing the EPA, along with the Departments of Transportation, Energy, and Agriculture, to initiate a regulatory process that responds to the

Supreme Court’s decision. Executive Order 13432 was codified into law by the 2009 Omnibus Appropriations Law signed on February 17, 2009. The order sets goals in the areas of energy efficiency, acquisition, renewable energy, toxics reductions, recycling, sustainable buildings, electronics stewardship, fleets, and water conservation.

In 2009, a national policy was adopted for fuel efficiency and emissions standards in the U.S. auto industry, which applies to passenger cars and light-duty trucks for model years 2012 through 2016. The standards surpass the prior Corporate Average Fuel Economy (CAFE) standards, and requires an average fuel economy standard of 35.5 miles per gallon (mpg) and 250 grams of CO₂ per mile by model year 2016, based on EPA calculation methods. In 2012, standards were adopted for model year 2017 through 2025 for passenger cars and light-duty trucks. By 2025, vehicles are required to achieve 54.5 mpg (if GHG reductions are achieved exclusively through fuel economy improvements) and 163 grams of CO₂ per mile. According to the EPA, a model year 2025 vehicle would emit one-half of the GHG emissions from a model year 2010 vehicle.³⁷

In 2017, the EPA issued its Mid-Term Evaluation of the GHG emissions standards, finding that it would be practical and feasible for automakers to meet the model year 2022–2025 standards through a number of existing technologies. In 2018, the EPA revised its 2017 determination, and published the final rule for the One National Program on Federal Preemption of State Fuel Economy Standards that finalizes the Safer Affordable Fuel-Efficient (SAFE) Vehicles Rule and makes clear that federal law preempts state and local tailpipe GHG emissions standards as well as zero emission vehicle (ZEV) mandates. The SAFE Vehicles Rule maintains the 2020 CAFE and CO₂ standards for model years 2021 through 2026.³⁸ On September 27, 2019, the EPA withdrew the waiver it had previously provided to California for the state’s GHG and ZEV programs under Section 209 of the CAA, which became effective November 26, 2019.³⁹ In November 2019, California and 23 other states, environmental groups, and the cities of Los Angeles and New York, filed a petition with the U.S. Court of Appeals for the District of Columbia Circuit, for the EPA to reconsider the published rule.⁴⁰

On January 20, 2021, President Biden issued Executive Order 13990 “Protecting Public Health and the Environment and Restoring Science to Tackle the Climate Crisis” which directed the EPA to consider whether to propose suspending, revising, or rescinding the standards previously revised under the SAFE Vehicles Rule. On April 28, 2021, the EPA reconsidered the withdrawal of the waiver of preemption for California's zero emission vehicle ZEV programs and GHG emission standards within California's Advanced Clean Car program for purposes of rescinding that action under the CAA. The Advanced Clean Car program waiver, as it pertains to the GHG emission standards and ZEV mandates, will become effective should EPA rescind the prior

³⁷ U.S. Environmental Protection Agency, 2012. 2017 and Later Model Year Light-Duty Vehicle Greenhouse Gas Emissions and Corporate Average Fuel Economy Standards. Available: (August 2012). Available: <https://www.epa.gov/regulations-emissions-vehicles-and-engines/final-rule-model-year-2017-and-later-light-duty-vehicle>. Accessed March 11, 2019

³⁸ Federal Register, 2018. Vol. 83, No. 165. August 24. Proposed Rules.

³⁹ Federal Register, 2019, *The Safer Affordable Fuel-Efficient (SAFE) Vehicles Rule Part One: One National Program*, 84 FR 51310, September 27, 2019.

⁴⁰ United States District Court for the District Court of Columbia, *State of California v. Chao*, Case 1:19-cv-02826, 2019.

action. As of November 1, 2021, the EPA has not yet taken final action on the reconsideration of the withdrawal of the waiver.

The EPA is also proposing to revise and strengthen federal GHG emissions standards for passenger cars and light trucks by setting stringent requirements for reductions through model year 2026 through the Revised 2023 and Later Model Year Light-Duty Vehicle Greenhouse Gas Emissions Standards.⁴¹ The proposed 2023 through 2026 model year standards would achieve GHG emissions reductions along with reductions in other pollutants by revising the current GHG standards beginning in model year 2023 and increasing the stringency year-over-year through model year 2026. The proposed standards would increase in stringency from model year 2022 to model year 2023 by 10 percent, followed by a nearly five percent stringency increase in each model year from 2024 through 2026. In comparison, the standards in the SAFE Vehicles Rule only required a 1.5 percent increase in stringency each year from model year 2021 through 2026. However, it should be noted that the EPA is not proposing to revise GHG emissions standards for model year 2021 and model year 2022. The estimated Revised 2023 and Later Model Year Light-Duty Vehicle Greenhouse Gas Emissions Standards CO₂ standards for model year 2026 are 52.0 mpg and 171 grams of CO₂ per mile for combined passenger cars and light trucks, as compared to 43.3 mpg and 205 grams of CO₂ per mile under the 2020 Final Rule standard (currently in effect), and 50.1 mpg and 177 grams of CO₂ per mile standards issued in 2012. Public comments on the proposed standards were due on or before September 27, 2021, after which time a decision may be made after consideration of the comments.

In addition to the regulations applicable to cars and light-duty trucks described above, in 2011 the EPA and NHTSA announced fuel economy and GHG standards for medium- and heavy-duty trucks for model years 2014–2018. The standards for CO₂ emissions and fuel consumption are tailored to three main vehicle categories: combination tractors, heavy-duty pickup trucks and vans, and vocational vehicles. According to the EPA, this regulatory program would reduce GHG emissions and fuel consumption for the affected vehicles by 6 to 23 percent over the 2010 baselines. Building on the first phase of standards, in August 2016, the EPA and NHTSA finalized Phase 2 standards for medium and heavy-duty vehicles through model year 2027 that will improve fuel efficiency and cut carbon pollution. The Phase 2 standards are expected to lower CO₂ emissions by approximately 1.1 billion metric tons.⁴²

State

California has promulgated a series of executive orders, laws, and regulations aimed at reducing both the level of GHGs in the atmosphere and emissions of GHGs within the state.

⁴¹ Federal Register, 2021, Proposed Rule, *Revised 2023 and Later Model Year Light-Duty Vehicle Greenhouse Gas Emissions Standards*, 86 Federal Register 43726, August 10, 2021.

⁴² U.S. Environmental Protection Agency, 2016, *EPA and NHTSA Adopt Standards to Reduce GHG and Improve Fuel Efficiency of Medium- and Heavy-Duty Vehicles for Model Year 2018 and Beyond*, August 2016.

California Greenhouse Gas Reduction Targets

Executive Order S-3-05 and Assembly Bill 32

Governor Schwarzenegger announced on June 1, 2005, through Executive Order S-3-05, the following GHG emission reduction targets:

- By 2010, California shall reduce GHG emissions to 2000 levels
- By 2020, California shall reduce GHG emissions to 1990 levels
- By 2050, California shall reduce GHG emissions to 80 percent below 1990 levels.

In accordance with Executive Order S-3-05, the Secretary of CalEPA is required to coordinate efforts of various agencies, which comprise the California Climate Action Team (CAT), in order to collectively and efficiently reduce GHGs. The CAT provides periodic reports to the Governor and Legislature on the state of GHG reductions in the state as well as strategies for mitigating and adapting to climate change.

The CAT stated that smart land use is an umbrella term for strategies that integrate transportation and land-use decisions. Such strategies generally encourage jobs/housing proximity, promote transit-oriented development (TOD), and encourage high-density residential/commercial development along transit corridors. These strategies develop more efficient land-use patterns within each jurisdiction or region to match population increases, workforce, and socioeconomic needs for the full spectrum of the population.

Executive Order B-55-18

Executive Order B-55-18 was signed by Governor Brown on September 10, 2018. The order establishes an additional statewide policy to achieve carbon neutrality, which CARB defines as meaning "...that all GHG emissions emitted into the atmosphere are balanced in equal measure by GHGs that are removed from the atmosphere, either through carbon sinks or carbon capture and storage" by 2045 and maintain net negative emissions thereafter. As per Executive Order B-55-18, CARB is directed to work with relevant state agencies to develop a framework for implementation and accounting that tracks progress toward this goal and to ensure that future climate change scoping plans identify and recommend measures to achieve the carbon neutrality goal. California is making progress towards the 2045 goal, however the pathway to carbon neutrality is still under development. According to CARB, there will be a strong reliance on energy efficiency, electrification, low carbon fuels (including low-carbon electricity), and CO₂ removal in future policies and strategies for reaching the ambitious goal. The path to carbon neutrality lies in striving for zero emissions from all new sources and maximum sequestration to offset existing sources.

Executive Order N-79-20

Executive Order N-79-20 was signed by Governor Newsom on September 23, 2020. The order directs CARB to develop and propose regulations that would require a ramp up to 100 percent in-state sales of new zero-emissions passenger vehicles (cars and trucks) and drayage trucks by 2035. The Executive Order further directs CARB to promulgate regulations that would require a ramp up to 100 percent in-state sales of medium- and heavy-duty trucks by 2045 "for all

operations where feasible.” The Executive Order also instructs CARB to develop and propose “strategies” (as opposed to regulations) to achieve zero emissions from off-road vehicles and equipment operations in the state by 2035. The order also directs state agencies to take a number of actions focused on the oil and gas industry, including, but not limited to, a direction to CARB to strengthen and extend the LCFS program beyond 2030.

Executive Order B-30-15 and Senate Bill 32/Assembly Bill 197

In 2015, Executive Order B-30-15 established the following new interim GHG emissions reduction target:

- By 2030, California shall reduce GHG emissions to 40 percent below 1990 levels.
- Ordered all state agencies with jurisdiction over sources of GHG emissions to implement measures to achieve reductions of GHG emissions to meet the 2030 and 2050 reduction targets.
- Directed CARB to update the Climate Change Scoping Plan to express the 2030 target in terms of million metric tons of carbon dioxide equivalent.

Senate Bill (SB) 32 and its companion bill Assembly Bill (AB) 197, was passed in 2016. SB 32 expanded upon AB 32 (described below), amending the California HSC Division 25.5 to codify the GHG emissions target in Executive Order B-30-15 of 40 percent below 1990 levels by 2030. AB 197 provides the Legislature greater authority over CARB and requires CARB to provide GHG emissions inventory report at least once a year.

Senate Bill 97 (SB 97, Dutton) (Chapter 185, Statutes of 2007)

SB 97 (Chapter 185, Statutes of 2007), enacted in 2007, directed the California Office of Planning and Research (OPR) to develop CEQA Guidelines “for the mitigation of GHG emissions or the effects of GHG emissions.” In December 2009, OPR adopted amendments to the CEQA Guidelines (Guidelines Amendments), Appendix G, Environmental Checklist, which created a new resource section for GHG emissions and indicated criteria that may be used to establish significance of GHG emissions (California Code of Regulations [CCR] Title 14, Section 15064.4).

However, neither a threshold of significance nor any specific mitigation measures are included or provided in the Guidelines Amendments. The Guidelines Amendments require a lead agency to make a good-faith effort, based on scientific and factual data to the extent possible, to describe, calculate, or estimate the amount of GHG emissions resulting from a project. The Guidelines Amendments give discretion to the lead agency, and allow the lead agency to choose whether to: (1) quantify GHG emissions resulting from a project; and/or (2) rely on a qualitative analysis or performance-based standards. Furthermore, the Guidelines Amendments identify three factors that should be considered in the evaluation of the significance of GHG emissions:

- The extent to which a project may increase or reduce GHG emissions as compared to the existing environmental setting;
- Whether the project emissions exceed a threshold of significance that the lead agency determines applies to the project; and

- The extent to which the project complies with regulations or requirements adopted to implement a statewide, regional, or local plan for the reduction or mitigation of GHG emissions.

The administrative record for the Guidelines Amendments also clarifies “that the effects of GHG emissions are cumulative, and should be analyzed in the context of California Environmental Quality Act’s requirements for cumulative impact analysis.”⁴³

California Global Warming Solutions Act of 2006

In 2006, the California State Legislature adopted Assembly Bill (AB) 32 (codified in the California Health and Safety Code (HSC), Division 25.5 – California Global Warming Solutions Act of 2006), which focuses on reducing GHG emissions in California to 1990 levels by 2020. HSC Division 25.5 defines regulated GHGs as CO₂, CH₄, N₂O, HFCs, PFCs, and SF₆ and represents the first enforceable statewide program to limit emissions of these GHGs from all major industries, with penalties for noncompliance. The law further requires that reduction measures be technologically feasible and cost effective. Under HSC Division 25.5, CARB has the primary responsibility for reducing GHG emissions. CARB is required to adopt rules and regulations directing state actions that would achieve GHG emissions reductions.

To achieve these goals, AB 32 mandates that CARB establish a quantified emissions cap, institute a schedule to meet the cap, implement regulations to reduce statewide GHG emissions from stationary sources consistent with the CAT strategies, and develop tracking, reporting, and enforcement mechanisms to ensure that reductions are achieved. In order to achieve the reduction targets, AB 32 requires CARB to adopt rules and regulations in an open public process that achieve the maximum technologically feasible and cost-effective GHG reductions.⁴⁴

In 2016, the California State Legislature adopted SB 32 and its companion bill AB 197, and both were signed by Governor Brown. SB 32 and AB 197 amend HSC Division 25.5, establish a new climate pollution reduction target of 40 percent below 1990 levels by 2030 and include provisions to ensure that the benefits of state climate policies reach disadvantaged communities. The new goals outlined in SB 32 update the Climate Change Scoping Plan requirement of AB 32 and 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.

AB 197, signed September 8, 2016, is a bill linked to SB 32 and signed on September 8, 2016, prioritizes efforts to cut GHG emissions in low-income or minority communities. AB 197 requires CARB to make available, and update at least annually, on its website the emissions of GHGs, criteria pollutants, and toxic air contaminants for each facility that reports to CARB and

⁴³ Letter from Cynthia Bryant, Director of the Office of Planning and Research to Mike Chrisman, Secretary for Natural Resources, dated April 13, 2009.

⁴⁴ California Air Resources Board’s list of discrete early action measures that could be adopted and implemented before January 1, 2010, was approved on June 21, 2007. The three adopted discrete early action measures are: (1) a low-carbon fuel standard, which reduces carbon intensity in fuels statewide; (2) reduction of refrigerant losses from motor vehicle air conditioning system maintenance; and (3) increased methane capture from landfills, which includes requiring the use of state-of-the-art capture technologies.

air districts. In addition, AB 197 adds two Members of the Legislature to the CARB board as ex officio, non-voting members and creates the Joint Legislative Committee on Climate Change Policies to ascertain facts and make recommendations to the Legislature and the houses of the Legislature concerning the state's programs, policies, and investments related to climate change.

California Air Resources Board

CARB, a part of CalEPA, is responsible for the coordination and administration of both federal and state air pollution control programs within California. In this capacity, CARB conducts research, sets state ambient air quality standards (California Ambient Air Quality Standards [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 (such as hairspray, aerosol paints, and barbecue lighter fluid), and various types of commercial equipment. CARB also sets fuel specifications to further reduce vehicular emissions. CARB has primary responsibility for the development of California's State Implementation Plan (SIP), for which it works closely with the federal government and the local air districts. The SIP is required for the state to take over implementation of the CAA. CARB also has primary responsibility for adopting regulations to meet the state's goal of reducing GHG emissions to 1990 levels by 2020.

In 2004, CARB adopted an Airborne Toxic Control Measure to limit heavy-duty diesel motor vehicle idling in order to reduce public exposure to diesel particulate matter and other toxic air contaminants (13 CCR, Section 2485). The measure applies to diesel-fueled commercial vehicles with gross vehicle weight ratings greater than 10,000 pounds that are licensed to operate on highways, regardless of where they are registered. This measure generally does not allow diesel-fueled commercial vehicles to idle for more than 5 minutes at any given location with certain exemptions for equipment in which idling is a necessary function such as concrete trucks. While this measure primarily targets diesel particulate matter emissions, it has co-benefits of minimizing GHG emissions from unnecessary truck idling.

In 2008, CARB approved the Truck and Bus regulation to reduce particulate matter and nitrogen oxide emissions from existing diesel vehicles operating in California (13 CCR, Section 2025, subsection (h)). CARB has also promulgated emission standards for off-road diesel construction equipment of greater than 25 horsepower, such as, bulldozers, loaders, backhoes and forklifts, as well as many other self-propelled off-road diesel vehicles. The regulation aims to reduce emissions by installation of diesel soot filters, and encouraging the retirement, replacement, or repower of older, dirtier engines with newer emission-controlled models. Refer to Section 3.2, *Air Quality*, of this Draft EIR, for additional details regarding these regulations. While these regulations primarily target reductions in criteria air pollutant emission, they have co-benefits of minimizing GHG emissions due to improved engine efficiencies.

2017 Climate Change Scoping Plan

In response to SB 32 and the state’s 2030 GHG reduction target, CARB adopted the 2017 Climate Change Scoping Plan in 2017.⁴⁵ In the 2017 Scoping Plan, CARB provides the estimated projected statewide 2030 emissions under business-as-usual (BAU) conditions (that is, emissions that would occur without any future plans, policies, or regulations to reduce GHG emissions to meet the 2030 GHG reduction target) and the level of reductions necessary to achieve the 2030 target of 40 percent below 1990 levels. CARB’s projected statewide 2030 BAU emissions takes into account GHG reduction policies and programs that were already adopted to meet the 2020 GHG reduction target. A summary of the GHG emissions reductions required under SB 32 (HSC Division 25.5) is provided in **Table 3.7-3, 2017 Estimated Greenhouse Gas Emissions Reductions Required by HSC Division 25.5.**

**TABLE 3.7-3
 2017 ESTIMATED GREENHOUSE GAS EMISSIONS REDUCTIONS REQUIRED BY HSC DIVISION 25.5**

Emissions Category	GHG Emissions (MMTCO ₂ e)
2017 Climate Change Scoping Plan	
2030 BAU Forecast (“Reference Scenario,” which includes 2020 GHG reduction policies and programs)	389
2030 Emissions Target Set by HSC Division 25.5 (i.e., 40% below 1990 Level)	260
Reduction below BAU Necessary to Achieve 40% below 1990 Level by 2030	129 (33.2%) ^a

NOTES: MTCO₂e = metric tons of carbon dioxide equivalent; BAU = business-as-usual

^a 389 – 260 = 129 / 389 = 33.2%

SOURCES: California Air Resources Board, 2017a, Final Supplement to the AB 32 Scoping Plan Functional Equivalent Document (FED), Attachment D, August 19, 2011; California Air Resources Board, 2017b, 2020 Business-as-Usual (BAU) Emissions Projection, 2014 Edition, 2017, <http://www.arb.ca.gov/cc/inventory/data/bau.htm>. Accessed October 2017; California Air Resources Board, 2017c, California’s 2017 Climate Change Scoping Plan, November 2017. Available at: https://www.arb.ca.gov/cc/scopingplan/scoping_plan_2017.pdf. Accessed November 2019.

The 2017 Scoping Plan outlines the strategies the state will implement to achieve the 2030 GHG reduction target. The Scoping Plan includes the Scoping Plan Scenario, which CARB stated “is the best choice to achieve the State’s climate and clean air goals.”⁴⁶ The Scoping Plan Scenario consists of ongoing and statutorily required programs and continuing the Cap-and-Trade Program, and was modified from the 2017 Scoping Plan to reflect AB 398, including removal of the 20 percent refinery measure. Under the Scoping Plan Scenario, the majority of the reductions would result from continuation of the Cap-and-Trade regulation. Additional reductions are achieved from increasing use of renewable resources for electricity sector (i.e., utility providers to supply 50 percent renewable electricity by 2030), doubling the energy efficiency savings at end uses, additional reductions from the LCFS, implementing the short-lived GHG strategy (e.g., hydrofluorocarbons), improved vehicle, truck and freight movement emissions standards, and strategies to reduce methane emissions from agricultural and other wastes by using it to meet our

⁴⁵ California Air Resources Board (CARB), 2017c. California’s 2017 Climate Change Scoping Plan. Available: www.arb.ca.gov/cc/scopingplan/scoping_plan_2017.pdf. Accessed March 10, 2019. November 2017

⁴⁶ California Air Resources Board (CARB), 2017c. California’s 2017 Climate Change Scoping Plan. Available: www.arb.ca.gov/cc/scopingplan/scoping_plan_2017.pdf. Accessed March 10, 2019. November 2017

energy needs. The 2017 Scoping Plan also comprehensively addresses GHG emissions from natural and working lands of California, including the agriculture and forestry sectors.

The 2017 Scoping Plan also discusses the role of local governments in meeting the state's GHG reductions goals because local governments have jurisdiction and land use authority related to: community-scale planning and permitting processes, local codes and actions, outreach and education programs, and municipal operations. Furthermore, local governments may have the ability to incentivize renewable energy, energy efficiency, and water efficiency measures.⁴⁷ The 2017 Scoping Plan encourages local governments to adopt Climate Action Plans to address local GHG emission sources. As discussed in the following pages, the City of Carson has adopted a Climate Action Plan to reduce local GHG emissions and achieve carbon neutrality.

Cap-and-Trade Program

The Climate Change Scoping Plan identifies a Cap-and-Trade Program as a key strategy CARB employed to help California meet its GHG reduction targets for 2020 and will continue to assist in the efforts to achieve the GHG reduction goals in 2030, and potentially beyond. Pursuant to its authority under AB 32, CARB has designed and adopted a California Cap-and-Trade Program to reduce GHG emissions from major sources (deemed "covered entities") by setting a firm cap on statewide GHG emissions and employing market mechanisms to achieve AB 32's emission-reduction mandate of returning to 1990 levels of emissions by 2020 (17 CCR Sections 95800 to 96023). Under the Cap-and-Trade Program, an overall limit is established for GHG emissions from capped sectors (e.g., electricity generation, petroleum refining, cement production, and large industrial facilities that emit more than 25,000 metric tons CO₂e per year) and declines over time, and facilities subject to the cap may trade permits to emit GHGs. The statewide cap for GHG emissions from the capped sectors commenced in 2013 and declines over time, achieving GHG emission reductions throughout the Program's duration (17 CCR Sections 95811, 95812). On July 17, 2017, the California legislature passed Assembly Bill 398, extending the Cap-and-Trade Program through 2030.

The Cap-and-Trade Program provides a firm cap, ensuring that the 2020 and 2030 statewide emission limits will not be exceeded. An inherent feature of the Cap-and-Trade Program is that it does not guarantee GHG emissions reductions in any discrete location or by any particular source. Rather, GHG emissions reductions are only guaranteed on an accumulative basis. In other words, as climate change is a global occurrence and the effects of GHG emissions are considered cumulative in nature, a focus on aggregate GHG emissions reductions, rather than source-specific reductions, is warranted.

If California's direct regulatory measures reduce GHG emissions more than expected, then the Cap-and-Trade Program will be responsible for relatively fewer emissions reductions. If California's direct regulatory measures reduce GHG emissions less than expected, then the Cap-and-Trade Program will be responsible for relatively more emissions reductions. In sum, the Cap-and-Trade Program will achieve aggregate, rather than site-specific or project-level, GHG

⁴⁷ California Air Resources Board (CARB), 2017c. California's 2017 Climate Change Scoping Plan. Available: www.arb.ca.gov/cc/scopingplan/scoping_plan_2017.pdf. Accessed March 10, 2019. November 2017

emissions reductions. Also, due to the regulatory framework adopted by CARB, the reductions attributed to the Cap-and-Trade Program can change over time depending on the state's emissions forecasts and the effectiveness of direct regulatory measures.

Transportation Sector

California Assembly Bill 1493 (AB 1493, Pavley)

In response to the transportation sector accounting for a large percentage of California's CO₂ emissions, AB 1493 (HSC Section 42823 and 43018.5), enacted in 2002, required CARB to set GHG emission standards for passenger vehicles, light-duty trucks, and other vehicles whose primary use is non-commercial personal transportation manufactured in and after 2009. In setting these standards, CARB must consider cost-effectiveness, technological feasibility, economic impacts, and provide maximum flexibility to manufacturers. The federal CAA ordinarily preempts state regulation of motor vehicle emission standards; however, California is allowed to set its own standards with a federal CAA waiver from the EPA, which the EPA granted in 2009.

However, as discussed previously, in 2018, the EPA published the final rule for the One National Program on Federal Preemption of State Fuel Economy Standards that finalizes the Safer Affordable Fuel-Efficient (SAFE) Vehicles Rule and makes clear that federal law preempts state and local tailpipe GHG emissions standards as well as zero emission vehicle (ZEV) mandates. The SAFE Vehicles Rule maintains the 2020 CAFE and CO₂ standards for model years 2021 through 2026.⁴⁸ On January 20, 2021, President Biden issued Executive Order 13990 "Protecting Public Health and the Environment and Restoring Science to Tackle the Climate Crisis" which directed the EPA to consider whether to propose suspending, revising, or rescinding the standards previously revised under the SAFE Vehicles Rule. On April 28, 2021, the EPA reconsidered the withdrawal of the waiver of preemption for California's zero emission vehicle ZEV programs and GHG emission standards within California's Advanced Clean Car program for purposes of rescinding that action under the CAA. The Advanced Clean Car program waiver, as it pertains to the GHG emission standards and ZEV mandates, will become effective should EPA rescind the prior action. As of November 1, 2021, the EPA has not yet taken final action on the reconsideration of the withdrawal of the waiver.

California Air Resources Board

CARB's Advanced Clean Car Program

In 2012, CARB adopted the Advanced Clean Cars emissions-control program, which is closely associated with the emissions standards for passenger vehicles and light-duty trucks discussed above.⁴⁹ The program requires an increase in the number of zero-emissions vehicle models for years 2015 through 2025 to control smog, soot and GHG emissions. By 2025, zero-emissions vehicles (ZEVs) must be 22 percent of large volume manufacturers overall production.⁵⁰ This program includes the Low-Emissions Vehicle (LEV) regulations to reduce criteria pollutants and

⁴⁸ Federal Register, 2018. Vol. 83, No. 165. August 24. Proposed Rules.

⁴⁹ CARB, 2017d, Clean Car Standards – Pavley, Assembly Bill 1493, <https://www.arb.ca.gov/cc/ccms/ccms.htm>, last reviewed January 11, 2017, accessed June 2021.

⁵⁰ CARB, 2021c, Current Zero-Emissions Vehicle Regulation, <https://ww2.arb.ca.gov/our-work/programs/advanced-clean-cars-program/zev-program/current-zero-emission-vehicle-regulation>, June 2021.

GHG emissions from light- and medium-duty vehicles; and ZEV regulations to require manufacturers to produce an increasing number of pure ZEVs (meaning battery and fuel cell electric vehicles) with the provision to produce plug-in hybrid electric vehicles (PHEV) between 2018 and 2025.

CARB's Advanced Clean Trucks Program

The Advanced Clean Trucks regulations were approved on June 25, 2020, and require that manufacturers sell zero-emissions or near-zero-emissions trucks as an increasing percentage of their annual California sales beginning in 2024. The goal of this proposed strategy is to achieve nitrogen oxide (NOx) and GHG emission reductions through advanced clean technology, and to increase the penetration of the first wave of zero-emissions heavy-duty technology into applications that are well suited to its use. According to CARB, “Promoting the development and use of advanced clean trucks will help CARB achieve its emission reduction strategies as outlined in the State Implementation Plan (SIP), Sustainable Freight Action Plan, SB 350, and AB 32.”⁵¹

The percentage of zero-emissions truck sales is required to increase every year until 2035 when sales would need to be 55 percent of Classes 2b–3 (light/medium- and medium-duty trucks) truck sales, 75 percent of Classes 4–8 (medium- to heavy-duty trucks) straight truck sales, and 40 percent of truck tractor (heavy-duty trucks weighing 33,001 pounds or greater) sales. Additionally, large fleet operators (of 50 or more trucks) would be required to report information about shipments and services and their existing fleet operations.

Airborne Toxic Control Measure to Limit Diesel-Fueled Commercial Motor Vehicle Idling

In 2004, CARB adopted an Airborne Toxic Control Measure to Limit Diesel-Fueled Commercial Motor Vehicle Idling in order to reduce public exposure to diesel particulate matter emissions (Title 13 CCR Section 2485 and Title 17 CCR Section 93115). The measure applies to diesel-fueled commercial vehicles with gross vehicle weight ratings greater than 10,000 pounds that are licensed to operate on highways, regardless of where they are registered. This measure does not allow diesel-fueled commercial vehicles to idle for more than 5 minutes at any given location. While the goal of this measure is primarily to reduce public health impacts from diesel emissions, compliance with the regulation also results in co-benefits of reduced GHG emissions in the form of reduced fuel combustion from unnecessary idling.

Low Carbon Fuel Standard

In 2007, Executive Order S-01-07 mandated the following: establish a statewide goal to reduce the carbon intensity of California’s transportation fuels by at least 10 percent by 2020; and adopt a LCFS for transportation fuels in California. CARB identified the LCFS as one of the nine discrete early actions in the Climate Change Scoping Plan. In 2009, the LCFS regulations were approved by CARB and established a reduction in the carbon intensity of transportation fuels by 10 percent by 2020 beginning in 2011. In 2015, CARB approved the re-adoption of the LCFS,

⁵¹ CARB, 2021c, Advanced Clean Trucks Program, <https://ww2.arb.ca.gov/our-work/programs/advanced-clean-trucks>, June 2021.

which became effective beginning January 2016, to address procedural deficiencies in the way the original regulation was adopted.

Sustainable Freight Action Plan

Executive Order B-32-15 directed the state to establish targets to improve freight efficiency, transition to zero-emissions technologies, and increase the competitiveness of California's freight transport system, including warehouses and distribution centers. The targets are not mandates, but rather aspirational measures of progress towards sustainability for the state to meet and try to exceed. The targets include:

- **System Efficiency Target:** Improve freight system efficiency by 25 percent by increasing the value of goods and services produced from the freight sector, relative to the amount of carbon that it produces by 2030.
- **Transition to Zero-Emissions Technology Target:** Deploy over 100,000 freight vehicles and equipment capable of zero-emissions operation and maximize near-zero-emissions freight vehicles and equipment powered by renewable energy by 2030.
- **Increased Competitiveness and Economic Growth Targets:** Establish a target or targets for increased state competitiveness and future economic growth within the freight and goods movement industry based on a suite of common-sense economic competitiveness and growth metrics and models developed by a working group comprised of economists, experts, and industry. These targets and tools will support flexibility, efficiency, investment, and best business practices through state policies and programs that create a positive environment for growing freight volumes and jobs, while working with industry to mitigate potential negative economic impacts. The targets and tools will also help evaluate the strategies proposed under the Action Plan to ensure consideration of the impacts of actions on economic growth and competitiveness throughout the development and implementation process.

Land Use and Transportation Planning

In 2008, SB 375 (Chapter 728, Statutes of 2008) established mechanisms for the development of regional targets for reducing passenger vehicle GHG emissions. Under SB 375, CARB is required, in consultation with the state's metropolitan planning organizations (MPOs), to set regional GHG reduction targets for the passenger vehicle and light-duty truck sector for 2020 and 2035.⁵² The proposed reduction targets explicitly exclude emission reductions expected from the AB 1493 and the LCFS regulations.

Under SB 375, the regional GHG reduction target must be incorporated within the applicable MPO's Regional Transportation Plan (RTP), which is used for long-term transportation planning, in a Sustainable Communities Strategy (SCS).

In 2011, CARB adopted GHG emissions reduction targets for the Southern California Association of Governments (SCAG), the MPO for the region in which the city of Carson is

⁵² California Air Resources Board, 2018. Sustainable Communities. Available: <https://www.arb.ca.gov/cc/sb375/sb375-rd.htm>. Accessed April 25, 2019.

located. In 2018, CARB updated the SB 375 targets to require an 8 percent reduction by 2020 and a 19 percent reduction by 2035 in per capita passenger vehicle GHG emissions.^{53,54}

Energy Sector

The California Building Energy Efficiency Standards for Residential and Nonresidential Buildings (CCR, Title 24, Part 6) were adopted to ensure that building construction and system design and installation achieve energy efficiency and preserve outdoor and indoor environmental quality. The CEC first adopted Energy Efficiency Standards for Residential and Nonresidential Buildings (CCR, Title 24, Part 6) in 1978 in response to a legislative mandate to reduce energy consumption in the state. Although not originally intended to reduce GHG emissions, increased energy efficiency and reduced consumption of electricity, natural gas, and other fuels would result in fewer GHG emissions from residential and nonresidential buildings subject to the standard. The standards are updated periodically (typically every three years) to allow for the consideration and inclusion of new energy efficiency technologies and methods.

The current California Building Energy Efficiency Standards (Title 24 standards) are the 2019 Title 24 standards, which became effective January 1, 2020. The 2019 Title 24 standards include efficiency improvements to the residential standards including requirements for solar power; encourages demand responsive technologies such as battery storage, improving the buildings thermal envelope through high performance attics, walls, and windows, and use of high-efficient air filters; and efficiency improvements to the non-residential standards include updates to indoor and outdoor lighting, and high-efficient air filters.

The California Green Building Standards Code (CCR, Title 24, Part 11), commonly referred to as the CALGreen Code, with the most current version being the 2019 version which became effective January 1, 2020. The CALGreen Code includes mandatory measures for non-residential development related to site development, energy efficiency, water efficiency and conservation; material conservation and resource efficiency; and environmental quality. The 2019 CALGreen Code includes: percentage of the total parking spaces either including or supporting future electric vehicle equipment; oversizing of photovoltaic systems, electrification of space and water heating; daylighting; upgraded efficiencies for outdoor lighting; and bicycle parking requirements.

The 2012 Appliance Efficiency Regulations (CCR, Title 20, Sections 1601 through 1608) took effect February 13, 2013. The regulations include standards for both federally regulated appliances and non-federally regulated appliances.

The state has adopted regulations to increase the proportion of electricity from renewable sources. In 2008, Executive Order S-14-08 expanded the state's RPS goal to 33 percent renewable power by 2020. In 2009, Executive Order S-21-09 directed CARB (under its AB 32 authority) to enact regulations to help the state meet the 2020 goal of 33 percent renewable energy. The 33 percent by 2020 RPS goal was codified with the passage of Senate Bill X1-2. This new RPS applied to all

⁵³ California Air Resources Board (CARB), 2017c. California's 2017 Climate Change Scoping Plan. Available: www.arb.ca.gov/cc/scopingplan/scoping_plan_2017.pdf. Accessed March 10, 2019. November 2017.

⁵⁴ California Air Resources Board, 2019a. SB 375 Regional Greenhouse Gas Emissions Reduction Targets. Available: <https://www.arb.ca.gov/cc/sb375/finaltargets2018.pdf>. Accessed March 11, 2019.

electricity retailers in the state, including publicly owned utilities (POUs), investor-owned utilities, electricity service providers, and community choice aggregators. SB 350 (Chapter 547, Statutes of 2015) further increased the RPS to 50 percent by 2030, including interim targets of 40 percent by 2024 and 45 percent by 2027. In 2018, SB 100 further increased California’s RPS and requires retail sellers and local publicly-owned electric utilities to procure eligible renewable electricity for 44 percent of retail sales by the end of 2024, 52 percent by the end of 2027, and 60 percent by the end of 2030; and requires that CARB should plan for 100 percent eligible renewable energy resources and zero-carbon resources by the end of 2045.

The California Public Utilities Commission (CPUC) and the CEC jointly implement the RPS program. The CPUC’s responsibilities include: (1) determining annual procurement targets and enforcing compliance; (2) reviewing and approving each investor-owned utility’s renewable energy procurement plan; (3) reviewing contracts for RPS-eligible energy; and (4) establishing the standard terms and conditions used in contracts for eligible renewable energy.

Regional

Southern California Association of Governments

In 2020, SCAG adopted the SCAG 2020–2045 RTP/SCS, also known as “Connect SoCal,” which is an update to the previous 2012–2035 RTP/SCS and 2016–2040 RTP/SCS.⁵⁵ Using growth forecasts and economic trends, the 2020–2045 RTP/SCS provides a vision for transportation throughout the region for the next several decades by considering the role of transportation in the broader context of economic, environmental, and quality-of-life goals for the future, identifying regional transportation strategies to address mobility needs. The 2020–2045 RTP/SCS describes how the region can attain the GHG emission-reduction targets set by CARB by achieving an 8 percent reduction in per capita transportation GHG emissions by 2020 and a 19 percent reduction in per capita transportation GHG emissions by 2035 compared to the 2005 level on a per capita basis.⁵⁶ Compliance with and implementation of the 2020–2045 RTP/SCS policies and strategies would have co-benefits of reducing per capita criteria air pollutant emissions (e.g., nitrogen dioxide, carbon monoxide, etc.) associated with reduced per capita vehicle miles traveled (VMT).

The 2020–2045 RTP/SCS states that the SCAG region was home to approximately 18.8 million people in 2016 and included approximately 6.0 million homes and 8.4 million jobs.⁵⁷ By 2045, the integrated growth forecast projects that these figures will increase by 3.7 million people, with approximately 1.6 million more homes and 1.7 million more jobs. SCAG’s 2020–2045 RTP/SCS provides specific strategies for implementation. These strategies include supporting projects that encourage diverse job opportunities for a variety of skills and education, recreation and cultures and a full-range of shopping, entertainment and services all within a relatively short distance; encouraging employment development around current and planned transit stations and neighborhood commercial centers; encouraging the implementation of a “Complete Streets” policy

⁵⁵ SCAG, 2020, *2020–2045 Regional Transportation Plan/Sustainable Communities Strategy (2020–2045 RTP/SCS)*, May 2020.

⁵⁶ SCAG, 2020, *2020–2045 Regional Transportation Plan/Sustainable Communities Strategy (2020–2045 RTP/SCS)*, May 2020.

⁵⁷ SCAG, 2020, *2020–2045 RTP/SCS Demographics and Growth Forecast Technical Report*, May 2020.

that meets the needs of all users of the streets, roads and highways including bicyclists, children, persons with disabilities, motorists, electric vehicles, movers of commercial goods, pedestrians, users of public transportation, and seniors; and supporting alternative fueled vehicles.⁵⁸

In addition, the 2020–2045 RTP/SCS includes strategies to promote active transportation; support local planning and projects that serve short trips; promote transportation investments, investments in active transportation, more walkable and bikeable communities that will result in improved air quality and public health and reduced GHG emissions; and support building physical infrastructure such as local and regional bikeways, sidewalk and safe routes to schools pedestrian improvements, regional greenways and first-last mile connections to transit, including to light rail and bus stations. The 2020–2045 RTP/SCS aligns active transportation investments with land use and transportation strategies, increases competitiveness of local agencies for federal and state funding, and expands the potential for all people to use active transportation. CARB has accepted the SCAG GHG quantification determination in the 2020–2045 RTP/SCS for future GHG emission reduction targets.⁵⁹

Although there are GHG emission reduction targets for passenger vehicles set by CARB for 2045, the 2020–2045 RTP/SCS GHG emission reduction trajectory shows that more aggressive GHG emission reductions are needed for 2045. By meeting and exceeding the SB 375 targets for 2035, as well as achieving an additional 4.1 percent reduction in GHG from transportation-related sources in the ten years between 2035 and 2045, the 2020–2045 RTP/SCS is expected to fulfill and exceed its portion of SB 375 compliance with respect to meeting the state’s future GHG emission reduction goals.⁶⁰ Refer to Section 3.10, *Land Use and Planning*, of this Draft EIR, for further discussion of the RTP/SCS.

South Coast Air Quality Management District

As discussed in Section 3.2, *Air Quality*, of this Draft EIR, SCAQMD is responsible for air quality planning in the South Coast Air Basin (where the Planning Area is located) and developing rules and regulations to bring the Air Basin into attainment of the ambient air quality standards. As part of its efforts to reduce local air pollution, SCAQMD has promoted a number of programs to combat climate change. For instance, SCAQMD has promoted energy conservation, low-carbon fuel technologies (natural gas vehicles; electric-hybrids, hydraulic-hybrids, and battery-electric vehicles), renewable energy, vehicle miles traveled (VMT) reduction programs, and market incentive programs.

A GHG Significance Threshold Working Group was formed by the SCAQMD to evaluate potential GHG significance thresholds.⁶¹ In 2008, the Working Group released draft guidance

⁵⁸ SCAG, 2020, *2020–2045 RTP/SCS*, May 2020.

⁵⁹ CARB, *Frequently Asked Questions for the 2016 Edition California Greenhouse Gas Emission Inventory*.

⁶⁰ SCAG, 2020, *2020–2045 RTP/SCS*, May 2020.

⁶¹ SCAQMD, 2021, *Greenhouse Gases CEQA Significance Thresholds*, <http://www.aqmd.gov/home/regulations/ceqa/air-quality-analysis-handbook/ghg-significance-thresholds>, accessed June 2021.

regarding interim CEQA GHG significance thresholds.⁶²⁻⁶³⁻⁶⁴ Within its October 2008 document, the Working Group proposed the use of a percent emission reduction target compared to business as usual to determine significance for commercial/residential projects that emit greater than 3,000 MTCO₂e per year. Under this proposal, commercial/residential projects that emit fewer than 3,000 MTCO₂e per year would be assumed to have a less-than-significant impact on climate change. In addition, on December 5, 2008, the SCAQMD Governing Board adopted the staff proposal for an interim GHG significance threshold of 10,000 MTCO₂e for stationary source/industrial projects where the SCAQMD is the Lead Agency. However, the SCAQMD has not adopted a GHG significance threshold for land use development projects. The aforementioned Working Group has been inactive since 2011 and the SCAQMD has not formally adopted any GHG significance threshold for land use development projects.

Local

Climate Action Plan

In 2017, the City of Carson adopted a Climate Action Plan (CAP) developed through the South Bay Cities Council of Governments (SBCCOG) that identifies community-wide strategies to lower GHG emissions. Emissions reductions within the CAP are from transportation, land use, energy generation and consumption, water consumption and waste generation. It is noted that the City's 2017 CAP has never been formally adopted through the CEQA process. Therefore, the City's CAP is not a qualified action plan under State CEQA Guidelines Section 15183.5(b) from which documents can tier from as a means to streamline the analysis of GHG emissions. The following CAP goals, policies, are relevant to GHGs with respect to the proposed General Plan update:

Goal LUT: A—Accelerate the Market for EV Vehicles

Measure LUT: A3—EV Charging Policies: EV charging policies incentivize EV adoption by making it easier to charge EVs.

Goal LUT: B—Encourage Ride-Sharing

Measure LUT: B1—Facilitate Private and Public Mobility Services: This strategy encourages public and private mobility services. It includes supporting private vendors in search of funds and not adopting positions that limit or exclude vendors. The measure considers service inter-operability as well as optimizing the customer experience for local residents.

Goal LUT: C—Encourage Transit Usage

Measure LUT: C1—Expand Transit Network: This strategy focuses on expanding the local transit network by adding or modifying existing transit service; additionally, it

⁶² SCAQMD, 2008a, *Draft Guidance Document – Interim CEQA Greenhouse Gas (GHG) Significance Threshold*, Attachment E, October 2008.

⁶³ SCAQMD, 2008b, Board Meeting, December 5, 2008, Agenda No. 31, <http://www3.aqmd.gov/hb/2008/December/0812ag.html>, accessed June 2021.

⁶⁴ SCAQMD, 2008c, *Greenhouse Gases, CEQA Significance Thresholds, Board Letter – Interim CEQA GHG Significance Threshold for Stationary Sources, Rules and Plans*, December 5, 2008.

includes transit strategies that address first/last mile connections which can encourage more people to travel via transit.

Goal LUT: D—Adopt Active Transportation Initiatives

Measure LUT: D2—Improve Design Development: This measure provides improved design elements to enhance slow speed multi-modalism such as walking and bicycling. This strategy may complement the concepts found in the SSBS to increase connectivity within new or proposed developments and improves street network characteristics within a neighborhood. These concepts could include slowspeed multi-modal networks.

Measure LUT: F2—Implement Commute Trip Reduction Programs: This measure establishes a Commute Trip Reduction Ordinance.

Goal LUT: G—Land Use Strategies

Measure LUT: G1—Increase Density: These strategies seek to increase destination accessibility by encouraging combined uses such as office, commercial, institutional, and residential within areas and developments.

Measure LUT: G2—Increase Diversity: These strategies encourage projects to mix uses such as office, commercial, institutional, and residential within the same development.

Measure LUT: G3—Increase Transit Accessibility: Transit accessibility strategies involve measures that encourage transit services through general plans, zoning codes, and ordinances as well as filling in gaps within the transit network.

Goal EE: B—Increase Energy Efficiency in New Residential Developments

Measure EE: B1—As part of the 2010 California Green Building Standards (CALGreen), a two-tiered system was designed to allow local jurisdictions to adopt codes that go beyond state standards. The two tiers contain measures that are more stringent and achieve an increased reduction in energy usage by 15 percent (Tier 1) or 30 percent (Tier 2) beyond Title 24. It is also important that Title 24 Standards are updated so that the full GHG reduction benefit of the title can be realized. City staff that are well-informed can implement updates quickly and effectively.

Goal EE: D—Increase Energy Efficiency in New Commercial Developments

Measure EE: D1—Encourage or Require EE Standards Exceeding Title 24: This measure will develop City staff to be resources in encouraging and implementing energy efficiency beyond that are required by current Title 24 Standards for commercial development. In addition, this measure helps ensure that Title 24 Standards are updated.

Goal EE: E—Increase Energy Efficiency through Water Efficiency

Measure EE: E1—Promote or Require Water Efficiency through SB X7-7: The Water Conservation Act of 2009 (SB X7-7), requires all water suppliers to increase water use efficiency. The legislation set an overall goal of reducing per capita urban water consumption by 20 percent from a baseline level by 2020. The goal of Water Conservation Act can be met by taking a variety of actions, including targeted public outreach and promoting water efficiency measures such as low-irrigation landscaping.

Additional water conservation information, resource materials, education, and incentives are available through the West Basin Water District.

Goal EE: F—Decrease Energy Demand through Reducing Urban Heat Island Effect.

Measure EE: F1—Promote Tree Planting for Shading and Energy Efficiency: Trees and plants naturally help cool an environment by providing shade and evapotranspiration (the movement of water from the soil and plants to the air), making vegetation a simple and effective way to reduce urban heat islands. Urban heat islands are urban areas that are significantly warmer than their surrounding rural areas due to human activities. Shaded surfaces may be 20–45°F cooler than the peak temperatures of un-shaded materials. In addition, evapotranspiration, alone or in combination with shading, can help reduce peak summer temperatures by 2–9°F. Furthermore, trees and plants that directly shade buildings can reduce energy use by decreasing demand for air conditioning.

Measure EE: F2—Incentivize or Require Light-Reflecting Surfaces: Replacing surface areas with light-reflecting materials can decrease heat absorption and lower outside air temperature. Both roofs and pavements are ideal surfaces for taking advantage of this advanced technology.

Goal SW: C—Increase Diversion and Reduction of Overall Community Waste

Measure SW: C1—Set a Community Goal to Divert Waste from Landfills: Setting a goal to divert a specified percentage of waste will show the City’s commitment to reducing the GHG gases emitted from the landfill.

Goal UG: A—Increase and Maintain Urban Greening in the Community

Measure UG: A3—Support Local Farms: Local farmers’ markets reduce GHG emissions by providing the community with a more local source of food, potentially resulting in a reduction in the number of trips and vehicle miles traveled by both the food delivery service and the consumers traveling to grocery stores. If the food sold at the local farmers’ market is produced organically, it can also contribute to GHG reductions by displacing carbon-intensive food production practices.

Goal EGS: A—Support Energy Generation and Storage in the Community

Measure EGS: A2—Siting and Permitting: To accelerate the implementation of renewable energy technologies, regulatory barriers need to be addressed to help ensure smooth deployment. Streamlining the siting and permitting process and reducing administrative burden to developers will help speed up the process of bringing these projects to reality.

Energy Efficiency Climate Action Plan

The City of Carson has adopted an Energy Efficiency Climate Action Plan (EECAP) developed through the SBCCOG that identifies community-wide strategies to lower energy use and resultant GHG emissions. Energy reductions within the CAP are from transportation, land use, energy

generation and consumption, water consumption and waste generation. The following EECAP goals, policies, are relevant to energy with respect to the Project:

Goal 2—Increase Energy Efficiency in New Residential Developments

Measure 2.1—Encourage or Require EE Standards Exceeding Title 24

Goal 4—Increase Energy Efficiency in New Commercial Development

Measure 4.1—Encourage or Require EE Standards Exceeding Title 24

Goal 5—Increase Energy Efficiency through Water Efficiency

Measure 5.1—Promote or Require water efficiency through SBX7-7

Measure 5.2—Promote water efficiency standards exceeding SBX7-7

Goal 6—Decrease Energy Demand through Reducing Urban Heat Island Effect.

Measure 6.1—Promote Tree Planting for Shading and Energy Efficiency

Measure 6.2—Incentivize or Require Light-Reflecting Surfaces

City of Carson Municipal Code

Energy

The City has adopted by reference, Title 31, Green Building Standards Code, of the Los Angeles County Code, as amended and in effect on January 1, 2020, which adopts the California Green Building Standards Code, 2019 Edition (CCR, Title 24, Part 11) and is known and may be cited as the Green Building Code of the City of Carson. The provisions of the Building Code, Existing Building Code, Residential Code, and Green Building Code applying to dwellings, lodging houses, congregate residences, motels, apartment houses, or other uses classified by the Building Code as a Group R Occupancy. The Green Building Code increases energy and water efficiency and reduces waste generation. The Green Building Code has co-benefits of reducing criteria pollutant emissions through the increase in energy efficiencies, which reduces building energy demand and the combustion of natural gas within buildings.

Water

As part of state and regional efforts towards water conservation, Article V, Sanitation and Health, Chapter 10, Water Conservation and Sustainability Measure, of the Carson Municipal Code includes requirements for water conservation and sustainability. The code requires recirculating water required for water fountains and decorative water features and commercial conveyor carwashes and the use of recycled or approved non-potable water for construction purposes. It is recommended that large, landscaped areas such as parks, cemeteries, golf courses, school grounds, and playing fields use irrigation systems with rain sensors that automatically shut off such systems during periods of rain or irrigation timers which automatically use information such as evapotranspiration sensors to set an efficient water schedule.

Solid Waste

Article V, Sanitation and Health, Chapter 2, Collection of Solid Waste and Recyclable Materials of the Carson Municipal Code contains provisions that implement the source reduction and recycling programs and other measures to achieve per capita waste generation for disposal in accordance with state and County programs. The City requires all collectors operating under a collection franchise within the city to comply with applicable resource recovery and diversion programs to minimize solid waste disposal at landfills.

3.5.4 Project Impact Analysis

Thresholds of Significance and Methodology

Thresholds of Significance

Appendix G of the State CEQA Guidelines provides screening questions that address potential impacts related to a number of environmental issues. The CEQA guidelines provides that lead agencies may use the questions set forth in the Appendix G to assess the significance of a project's environmental effects, and the use of Appendix G as a significance threshold is routinely sanctioned by the courts (although such use is not mandatory). Based on the Appendix G questions regarding GHG emissions, a project would have a significant impact if the project would:

- Threshold GHG-1:** Generate GHG emissions, either directly or indirectly, that may have a significant impact on the environment; or
- Threshold GHG-2:** Conflict with any applicable plan, policy or regulation adopted for the purpose of reducing the emissions of GHGs?

The State CEQA Guidelines does not establish a threshold of significance; rather, lead agencies are granted discretion to establish significance thresholds for their respective jurisdictions, including by looking to thresholds developed by other public agencies, such as air districts, or suggested by other experts, such as California Air Pollution Control Officers Association (CAPCOA), so long as any threshold chosen is supported by substantial evidence (see Section 15064.7(c)). Lead agencies are granted discretion to establish significance thresholds for their respective jurisdictions, including by looking to thresholds developed by other public agencies, such as air districts, or suggested by experts, such as CAPCOA. A lead agency may also use thresholds on a case-by-case basis. (*Id.*, subd. (b)) Each case must be analyzed in light of its own facts and circumstances.

CEQA Guidelines Section 15064.4 gives lead agencies the discretion to determine whether to assess the significance of GHG emissions quantitatively or qualitatively. Section 15064.4 recommends considering certain factors, among others, when determining the significance of a project's GHG emissions, including the extent to which the proposed project may increase or reduce GHG emissions as compared to the existing environment; whether a proposed project exceeds an applicable significance threshold that the lead agency determines applies to a proposed project; and extent to which a proposed project complies with regulations or requirements adopted to implement a reduction or mitigation of GHGs.

The CNRA’s Final Statement of Reasons for Regulatory Action from December 2009 similarly provides that project-level quantification of emissions should be conducted where it would assist in determining the significance of emissions, even where no numeric threshold applies. In such cases, CNRA’s guidance provides that qualitative thresholds can be utilized to determine the ultimate significance of project-level impacts based on a project’s consistency with plans, which can include applicable regional transportation plans. Even when using a qualitative threshold, quantification can inform “the qualitative factors” and indicate “whether emissions reductions are possible, and, if so, from which sources.”⁶⁵

Neither CARB nor the City has adopted quantitative significance thresholds for assessing impacts related to GHG emissions. CEQA Guidelines section 15183.5 states that a lead agency may determine that a project’s incremental contribution to a cumulative effect is not cumulatively considerable if the project complies with the requirements in a previously adopted mitigation program, or plan for the reduction of GHG emissions. Per CEQA Guidelines Section 15064(h)(3), a project’s incremental contribution to a cumulative impact can be found not cumulatively considerable if a project would comply with an approved plan or mitigation program that provides specific requirements that will avoid or substantially lessen the cumulative problem within the geographic area of a project. To qualify, such a plan or program must be specified in law or adopted by the public agency with jurisdiction over the affected resources through a public review process to implement, interpret, or make specific the law enforced or administered by the public agency (CCR, Title 14, Section 15064(h)(3)). Examples of such programs include a “water quality control plan, air quality attainment or maintenance plan, integrated waste management plan, habitat conservation plan, natural community conservation plan, [and] plans or regulations for the reduction of greenhouse gas emissions” (CCR, Title 14, Section 15064(h)(3)).

Even in the absence of clearly defined thresholds for GHG emissions, the law requires that an agency makes a good faith effort to disclose the GHG emissions from a project and mitigate to the extent feasible whenever the lead agency determines that a project contributes to a significant, cumulative climate change impact. Regardless of which threshold(s) are used, the agency must support its analysis and significance determination with substantial evidence (CEQA Guidelines, Section 15064.7). The CEQA Guidelines recommends considering certain factors, among others, when determining the significance of a project’s GHG emissions, including the extent to which a project may increase or reduce GHG emissions as compared to the existing environment; whether a project exceeds an applicable significance threshold; and extent to which a project complies with regulations or requirements adopted to implement a reduction or mitigation of GHGs.

According to CAPCOA, “GHG impacts are exclusively cumulative impacts; there are no non-cumulative GHG emission impacts from a climate change perspective.”⁶⁶ Due to the complex physical, chemical and atmospheric mechanisms involved in global climate change, there is no basis for concluding that a single project’s increase in annual GHG emissions would cause a measurable change in global GHG emissions necessary to influence global climate change.

⁶⁵ CNRA, 2009b, Final Statement of Reasons for Regulatory Action, December 2009, pp. 20–26.

⁶⁶ California Air Pollution Control Officers Association (CAPCOA), 2008. CEQA & Climate Change: Evaluating and Addressing Greenhouse Gas Emissions from Projects Subject to the California Environmental Quality Act.

Section 15064.4(b) of the CEQA Guidelines states that “in determining the significance of a project’s greenhouse gas emissions, the lead agency should focus its analysis on the reasonable, foreseeable incremental contribution of a 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 Project is a planning document, the approval of which would not directly result in the development of land uses and would not directly result in GHG emissions. Future GHG emissions may result from new development that could occur from adoption of the proposed General Plan update. This assessment quantifies GHG emissions from such new development under buildout conditions of the proposed General Plan update. Although GHG emissions have been quantified as discussed under the *Methodology and Assumptions* subsection below, neither CARB, SCAQMD, nor the City has adopted quantitative significance thresholds. In the absence of any adopted quantitative threshold, the determination of whether or not new development that could occur from adoption of the proposed General Plan update would result in a cumulatively considerable contribution to the cumulative impacts of global climate change is based on the following:

- If the Project would conflict with (and thereby be inconsistent with) the applicable GHG emissions reduction plans, policies, and regulations, which include the emissions reduction measures included within CARB’s Climate Change Scoping Plan; SCAG’s 2020–2045 RTP/SCS; and the City’s CAP energy efficiency goals and strategies. The Carson City Council approved the Energy Efficiency Chapter of the City’s CAP (City Council Resolution No. 15 111) on October 7, 2015. Therefore, the CAP is an applicable plan with specific requirements that will avoid or substantially lessen GHG emissions.

Methodology and Assumptions

With respect to GHG emissions, the CEQA Guidelines state in Section 15064.4(a) that lead agencies should “make a good faith effort, to the extent possible on scientific and factual data, to describe, calculate or estimate” GHG emissions. The CEQA Guidelines note that a lead agency shall have the discretion to “quantify the GHG emissions from a project, and/or rely on a qualitative analysis or other performance-based standards” (14 CCR, Section 15064.4(a)).

In its CEQA review of projects, the City of Carson has chosen to provide both a quantitative and qualitative GHG analysis for full disclosure. The methodology of analyzing the GHG emissions that may result from new development that could occur from adoption of the proposed General Plan update is conducted as described below.

Greenhouse Gas Emissions

The Climate Action Registry General Reporting Protocol provides procedures and guidelines for calculating and reporting GHG emissions from general and industry-specific activities. Although no numerical thresholds of significance have been adopted, and no specific protocols are available for land use projects, the General Reporting Protocol provides a framework for calculating and reporting GHG emissions. The GHG emissions provided in this report are consistent with the General Reporting Protocol framework. For the purposes of this EIR, estimated GHG emissions from the operation of new development that could occur with adoption

of the proposed General Plan update are quantified to provide information to decision makers and the public regarding the level of the GHG emissions. GHG emissions are typically separated into three categories that reflect different aspects of ownership or control over emissions:

- Scope 1: Direct, on-site combustion of fossil fuels (e.g., natural gas, propane, gasoline, and diesel).
- Scope 2: Indirect, off-site emissions associated with purchased electricity or purchased steam.
- Scope 3: Indirect emissions associated with other emissions sources, such as third-party vehicles and embodied energy.⁶⁷

Direct GHG emissions from new development would result from natural gas combustion and landscaping equipment, and indirectly from electricity demand, water conveyance, wastewater generation, solid waste decomposition, and motor vehicles. Since potential impacts resulting from GHG emissions are long-term rather than acute, GHG emissions are calculated on an annual basis.

The quantification of GHGs from any project involves many uncertainties. For example, it is reasonable to assume that some portion of the residents, employees, and visitors that would occupy new development that would occur under the proposed General Plan update would engage in similar activities (working, recreating, and driving) that generate GHG emissions without adoption of the proposed General Plan update. However, adoption of the proposed General Plan update could result in changing travel behavior that reduces vehicle miles traveled. Additionally, newer construction materials and practices, future energy efficiency requirements, future mobile source emission standards, and advances in technology would likely reduce future levels of emissions. However, the net effect is difficult to quantify due to the difficulty in predicting future behaviors of residents, employees, and visitors and future standards and requirements. As such, the estimated net change in emissions that could result from new development under the proposed General Plan update is likely to be an over-estimation. These same uncertainties and assumptions exist throughout the accepted analytical methodologies for quantifying GHG emissions. Additional details regarding emissions quantification is provided below.

Construction Emissions

Construction of new development that could occur from adoption of the proposed General Plan update would have the potential to increase GHG emissions through the use of heavy-duty construction equipment, such as excavators, cranes, and forklifts, and through vehicle trips generated from workers and haul trucks traveling to and from project sites.

The Project is a planning-level document, and, as such, there are no specific projects, project construction dates, or specific construction plans identified. Therefore, quantification of GHG emissions associated with future development under the proposed General Plan update cannot be specifically determined at this time. Therefore, the analysis will be based on the potential for

⁶⁷ Embodied energy includes energy required for water pumping and treatment for end-uses.

construction to conflict with applicable plans, policies, and regulations to reduce GHG emissions in the context of overall development GHG emissions.

Operational Emissions

Operation of new development that could occur from adoption of the proposed General Plan update would generate GHG emissions from on-site operations such as natural gas combustion for heating/cooking, landscaping equipment and the use of consumer products. GHG emissions would also be generated by vehicle trips, electricity demand, water demand, wastewater generation, and solid waste decomposition. Operational impacts were assessed for the full Project buildout year of 2040, as well as for the existing uses operating in future year 2040.

VMT data, which takes into account mode and trip lengths, was developed for the transportation analysis. Emissions from motor vehicles are dependent on vehicle type. Thus, the emissions were calculated using a representative motor vehicle fleet mix for the region based on the CARB EMFAC2021 model and default fuel type. EMFAC2021 was used to generate emissions factors for operational mobile sources based on fuel type and vehicle class. However, traffic reduction policies within the General Plan Circulation element, to which the regional travel demand model may not be fully sensitive (such as connectivity in neighborhoods, presence of bicycle and pedestrian facilities, and transportation demand management measures), may not be fully reflected in the VMT and emissions estimates. Therefore, estimated mobile source emissions are conservatively higher.

Emissions of GHGs from buildout of new development that could occur under the proposed General Plan update are estimated using CalEEMod, which is a statewide land use emission 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 from a variety of land use projects. CalEEMod was developed in collaboration with the air districts of California, and is recommended by SCAQMD. Regional data (e.g., emission factors, trip lengths, meteorology, source inventory, etc.) have been provided by the various California air districts to account for local requirements and conditions. The model is considered to be an accurate and comprehensive tool for quantifying GHG emissions from land use development throughout California. For new development, CalEEMod default values were used for area source emissions except that wood stoves and wood fireplaces were removed from the emissions calculations as they are not permitted within SCAQMD's jurisdiction for most new commercial and residential development per SCAQMD Rule 445 and no fireplaces are permitted in multi-family residential units. Future development is assumed to comply with the Title 24 (2019) building energy efficiency standards, which is a conservative assumption since future Title 24 standards, typically adopted every three years, would reduce building energy demand for future development permitted in 2022 and later.

Emissions of GHG from water and wastewater are due to the required energy to supply, distribute and treat. Wastewater also results in emissions of GHGs from wastewater treatment systems. For new development, CalEEMod default water and wastewater related GHG emissions are assumed in the analysis. A municipal solid waste diversion rate of 75 percent is assumed in compliance with AB 341 (refer to Section 3.17, *Utilities and Service Systems*, of this Draft EIR, for additional

information regarding AB 341). For solid waste, the default values, as provided in CalEEMod, for landfill gas capture (e.g., no capture, flaring, energy recovery) are statewide averages and are used in this assessment.

Since early 2019, the city receives its electricity from the Clean Power Alliance (CPA). The CPA buys electricity from renewable sources and partners with Southern California Edison to distribute electricity to residential and commercial customers throughout the city. The City has chosen 50 percent Green Power as a step to reaching carbon neutrality and all customers are defaulted to receive electricity from 50 percent renewable resources. However, as customers have the ability to choose lower or higher renewable energy percentages or to opt out of the CPA, the analysis conservatively assumes that the renewable usage is equal to that of Southern California Edison's renewable production via compliance with the state's Renewables Portfolio Standard.⁶⁸

Other sources of GHG emissions from operation of the Project include equipment used to maintain landscaping, such as lawnmowers and trimmers. CalEEMod default emission rates were used in calculating GHG emissions from these additional sources.

Project Consistency with GHG Reduction Plans

The State CEQA Guidelines encourage lead agencies to make use of programmatic mitigation plans and programs from which to tier when they perform individual project analyses. Section 15183.5 of the CEQA Guidelines states that a lead agency may determine that a project's incremental contribution to a cumulative effect is not cumulatively considerable if the project complies with the requirements in a previously adopted mitigation program, or plan for the reduction of GHG emissions that includes the following elements:

- Quantify GHG emissions, both existing and projected over a specified time period, resulting from activities within a defined geographic area;
- Establish a level, based on substantial evidence, below which the contribution to GHG emissions from activities covered by the plan would not be cumulatively considerable;
- Identify and analyze the GHG emissions resulting from specific actions or categories of actions anticipated within the geographic area;
- Specify measures or a group of measures, including performance standards, that substantial evidence demonstrates, if implemented on a project-by-project basis, would collectively achieve the specified emissions level;
- Establish a mechanism to monitor the plan's progress toward achieving the level and to require amendment if the plan is not achieving specified levels; and
- Be adopted in a public process following environmental review.

CARB's Climate Change Scoping Plan (last updated in May 2014) provides strategies and recommendations for achieving the AB 32 target, and the California CAT Report provides

⁶⁸ The CPA allows for 100 percent, 50 percent, and 36 percent renewable energy content as well as the option to opt out of the program all together. Assuming that all of the city's residents opt out of the program is a highly conservative assumptions and therefore the analysis will likely overestimate net Project emissions.

recommendations for specific emission reduction strategies for reducing GHG emissions and reaching the targets established in AB 32 and Executive Order S-3-05.

Project Impact Analysis

Generate GHG emissions, either directly or indirectly, that may have a significant impact on the environment

Conflict with GHG Reduction Plan, Policy, or Regulation

Threshold GHG-1: The Project would have a significant impact if future development allowed by Carson2040 would generate GHG emissions, either directly or indirectly, that may have a significant impact on the environment.

Threshold GHG-2: The Project would have a significant impact if future development allowed by Carson2040 would conflict with any applicable plan, policy or regulation adopted for the purpose of reducing the emissions of GHGs.

Impact GHG-1: *The Project would not generate GHG emissions, either directly or indirectly, that may have a significant impact on the environment. (Less than Significant)*

Impact GHG-2: *The Project would not conflict with any applicable plan, policy or regulation adopted for the purpose of reducing the emissions of GHGs. (Less than Significant)*

Construction

As stated above, the Project is a planning document, the approval of which would not directly result in the development of land uses and would not directly result in GHG emissions. Future GHG emissions may result from new development that could occur from adoption of the proposed General Plan update. Construction of future new development has the potential to generate GHG emissions through the use of heavy-duty construction equipment and through vehicle trips generated by construction workers and haul trips traveling to and from each specific project site. Construction emissions can vary substantially from day to day, depending on the level of activity and the specific type and amount of equipment. However, as there are no specific projects currently approved or proposed under the Project and there is no knowledge as to timing of construction, location or the exact nature of future projects, analysis of construction emissions would be speculative at best. Information regarding specific development projects, including specific buildings and facilities proposed to be constructed, construction schedules, quantities of grading, and other information would be required in order to provide a meaningful estimate of emissions. Since this information is unknown, emissions modeling is not feasible.

Each future project developed under the proposed General Plan update would be required to comply with applicable EPA, CARB and SCAQMD emissions standards, rules, and regulations as well as conduct their own applicable CEQA analysis and would determine significance based on the individual project specifics. Furthermore, future construction activities under the proposed General Plan update would be required to comply with the CARB Air Toxics Control Measure, which limits diesel powered equipment and vehicle idling to no more than five minutes at a location (13 CCR, Section 2485), CARB In-Use Off-Road Diesel Vehicle regulation, CARB

Truck and Bus regulation, SAFE Vehicle Rule (or its successor rule), and CARB Advanced Clean Car and Advanced Clean Trucks regulations, all of which support the goals of the CARB Climate Change Scoping Plan by requiring construction equipment and vehicle fleet operators to repower or replace higher-emitting equipment with less polluting models, including zero- and near-zero-emissions on-road vehicle and truck technologies as they become developed and commercially available. Mandatory compliance with these rules and regulations would reduce GHG emissions, including fuel combustion emissions of CO₂, CH₄, and N₂O, during future construction activities under the proposed General Plan update.

Operation

Operation of future development under the proposed General Plan update would generate emissions of GHG emissions from vehicle trips traveling within the city, energy sources such as electricity demand and natural gas combustion, area sources such as fireplaces and landscaping equipment, water conveyance and distribution, wastewater treatment, and solid waste decomposition. Projected emissions resulting from operational activities of both existing and future development under the proposed General Plan update are presented in **Table 3.7-4, Unmitigated Annual Greenhouse Gas Emissions.**

**TABLE 3.7-4
 UNMITIGATED ANNUAL GREENHOUSE GAS EMISSIONS**

Emissions Sources	CO₂e (Metric Tons per Year) ^{a,b}
Existing Development plus Carson2040 New Development (2040)	
Area (Fireplaces, Landscaping)	6,910
Energy (Electricity and Natural Gas)	124,001
Mobile (Based on 2040 with GPU VMT)	472,925
Solid Waste	20,029
Water and Wastewater	24,449
Annual Emissions	648,314
Existing Development (2016)	997,594
Net Change	(349,281)

^a Totals may not add up exactly due to rounding in the modeling calculations. Detailed emissions calculations are provided in Appendix D.

^b CO₂e emissions are calculated using the global warming potential values from the Intergovernmental Panel on Climate Change Fourth Assessment Report.

SOURCE: Prepared by Environmental Science Associates bases on Appendix D.

As shown in Table 3.7-4, the net change in operational emissions from existing conditions (2016) compared to existing plus buildout of new development under the proposed General Plan update at 2040 buildout would be negative compared to existing (2016) conditions primarily due to the focus of the proposed General Plan update on infill development and revitalization to help the City of Carson achieve an integrated land use mix that accommodates growth while reducing VMT and associated emissions, improvements in vehicle emissions standards and, to a lesser extent, improvements in building energy efficiency standards. Development of future new

residential and nonresidential uses would be based on market demand and would be constructed over the buildout duration through 2040.

The proposed General Plan policies, listed below, would reduce potential emissions from future new, as well as existing, development. In addition, future new development under the proposed General Plan update would be required to conduct their own CEQA analysis and would determine significance based on the individual project specifics. Through each project's individual environmental review process, potential impacts would be identified and compared against relevant thresholds. Individual projects that exceed the thresholds would normally result in a potentially significant impact and require mitigation.

Greenhouse Gas Reduction Plans, Policies, and Regulations

2017 Climate Change Scoping Plan

The Project would not conflict with state plans and regulatory requirements referenced in the 2017 Climate Change Scoping Plan, the purpose of which is to reduce statewide GHG emissions to 40 percent below 1990 levels by 2030. The 2017 Climate Change Scoping Plan outlines a framework that relies on a broad array of GHG reduction actions, which include direct regulations, alternative compliance mechanisms, incentives, voluntary actions, and market-based mechanisms such as the Cap-and-Trade program and builds off of a wide array of regulatory requirements that have been promulgated to reduce statewide GHG emissions, particularly from energy demand and mobile sources. According to the 2017 Climate Change Scoping Plan, reductions needed to achieve the 2030 target are expected to be achieved by increasing the RPS to 50 percent of the state's electricity by 2030, increasing the fuel economy of vehicles and the number of zero-emission or hybrid vehicles, reducing the rate of growth in VMT, supporting high speed rail and other alternative transportation options, and increasing the use of high efficiency appliances, water heaters, and HVAC systems.

Table 3.7-5, *Consistency with Applicable Climate Change Scoping Plan Greenhouse Gas Reduction Strategies*, contains a list of the GHG-reducing strategies from the 2017 Climate Change Scoping Plan. The analysis describes the Project's compliance and consistency with these strategies outlined in the state's Climate Change Scoping Plan to reduce GHG emissions. As discussed below, the Project would not conflict with applicable 2017 Climate Change Scoping Plan strategies and regulations to reduce GHG emissions.

**TABLE 3.7-5
 CONSISTENCY WITH APPLICABLE CLIMATE CHANGE SCOPING PLAN
 GREENHOUSE GAS REDUCTION STRATEGIES**

Actions and Strategies	Responsible Party	Compliance/Consistency Analysis
Energy		
<p>Senate Bill 350 (SB 350). The Clean Energy and Pollution Reduction Act of 2015 increases the standards of the California Renewable Portfolio Standard (RPS) program by requiring that the amount of electricity generated and sold to retail customers per year from eligible renewable energy resources be increased to 50 percent by 2030.¹</p> <p>Required measures include:</p> <ul style="list-style-type: none"> • 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 and other actions as modeled in IRPs to meet GHG emissions reductions planning targets in the IRP process. Load-serving entities and publicly owned utilities meet GHG emissions reductions planning targets through a combination of measures as described in IRPs. 	<p>CPUC, CEC, CARB, Southern California Edison (SCE)</p>	<p>Not Applicable/No Conflict. SB 350 applies to electric utility providers in California and does not apply directly to land use planning projects, such as the proposed General Plan update. While this provision of SB 350 applies to the generators and suppliers of energy sources, the Project would support SB 350's goals since future development that could occur under the proposed General Plan update would use electricity provided by SCE, which is required to meet the energy performance standard of 50 percent renewable energy by 2030, along with applicable GHG emissions reductions planning targets in its Strategic Long-Term Resource Plan. The legislation also included interim targets of 40 percent by 2024 and 45 percent by 2027. In 2020, SCE provided 43 percent from renewable sources, exceeding the required target 33 percent by 2020 established under previous legislation.²</p> <p>As required under SB 350, doubling of the energy efficiency savings from final end uses of retail customers by 2030 would primarily rely on the existing suite of building energy efficiency standards under CCR, Title 24, Part 6 and utility-sponsored programs such as rebates for high-efficiency appliances, HVAC systems, and insulation. Future development under the proposed General Plan update would meet or exceed the applicable requirements of Title 24, Part 6, as well as the California Green Building Standards Code in Title 24, Part 11 as adopted and amended in the Carson Municipal Code. The Project would further support this action and strategy by incorporating energy efficiency measures as outlined in proposed General Plan policies, listed below. As such, the Project would not conflict with SB 350.</p>
<p>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.</p>	<p>CPUC, SCE</p>	<p>Not Applicable/No Conflict. SB 100 applies to electric utility providers in California and does not apply directly to land use development planning projects, such as the Project. While this provision of SB 100 applies to the generators and suppliers of energy sources, the Project would support SB 100's goals since future development under the proposed General Plan update would utilize the renewable energy provided by the regulated entity, SCE. SCE is required to generate electricity that would increase renewable energy resources to 33 percent by 2020 and 50 percent by 2030. As SCE would provide electricity service to the Project, by 2030, the Project would use electricity consistent with the requirements of SB 100. In 2020, SCE provided 43 percent from renewable sources, exceeding the required target 33 percent by 2020 established under previous legislation.²</p> <p>The Project would comply with this action/strategy as the city is located within the SCE service area and future development under the proposed General Plan update would be required to comply with CALGreen and Title 24 energy efficiency standards. As such, the Project would not conflict with SB 100.</p>

Actions and Strategies	Responsible Party	Compliance/Consistency Analysis
Mobile		
<p>Implement Mobile Source Strategy (Cleaner Technology and Fuels):</p> <ul style="list-style-type: none"> 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. Implementation of federal phase 2 standards for medium- and heavy-duty vehicles. Innovative Clean Transit: Transition to a suite of to-be-determined innovative clean transit options. Assumed 20 percent of new urban buses purchased beginning in 2018 will be zero emission buses with the penetration of zero-emission technology ramped up to 100 percent of new sales in 2030. Also, new natural gas buses, starting in 2018, and diesel buses, starting in 2020, meet the optional heavy-duty low-NO_x standard. Last Mile Delivery: New regulation that would result in the use of low NO_x or cleaner engines and the deployment of increasing numbers of zero-emission trucks primarily for class 3-7 last mile delivery trucks in California. This measure assumes ZEVs comprise 2.5 percent of new Class 3–7 truck sales in local fleets starting in 2020, increasing to 10 percent in 2025 and remaining flat through 2030. Further reduce VMT through continued implementation of SB 375 and regional Sustainable Communities Strategies; forthcoming statewide implementation of SB 743; and potential additional VMT reduction strategies not specified in the Mobile Source Strategy but included in the document “Potential VMT Reduction Strategies for Discussion.” 	<p>CARB, CalSTA, SGC, Caltrans, CEC, OPR, Local Agencies</p>	<p>Not Applicable/No Conflict. The 2017 Climate Change Scoping Plan Mobile Source Strategy applies to vehicle manufacturers, bus and transit operators, truck fleet and delivery operators, and local planning agencies. While this strategy does not apply directly to land use development planning projects, such as the Project, future development under the proposed General Plan update would not conflict with the goals of the Mobile Source Strategy as outlined below.</p> <p>CARB approved the Advanced Clean Cars Program that includes Low-Emission Vehicle (LEV) regulations that reduce criteria pollutants and GHG emissions from light- and medium-duty vehicles, and the Zero-Emission Vehicle (ZEV) regulation, which requires manufacturers to produce an increasing number of pure ZEVs (meaning battery electric and fuel cell electric vehicles), with provisions to also produce plug-in hybrid electric vehicles (PHEV) in the 2018 through 2025 model years. While this action does not directly apply to land use development planning projects, the standards would apply to all vehicles purchased or used by occupants, vendors, and visitors of the city. Future development under the proposed General Plan update would be required to comply with Carson Municipal Code and CALGreen requirements regarding the number of electric vehicle-ready and electric vehicle-capable parking spaces to support ZEVs and PHEVs. As such, the Project would not conflict with implementation of this strategy.</p> <p>The Advanced Clean Truck Regulation has two components, a manufacturer sales requirement, and a reporting requirement. The manufacturer component of the regulation requires manufacturers that certify Class 2b-8 chassis or complete vehicles with combustion engines to sell zero-emission trucks as an increasing percentage of their annual California sales from 2024 to 2035. By 2035, zero-emission truck/chassis sales would need to be 55 percent of Class 2b – 3 truck sales, 75 percent of Class 4 – 8 straight truck sales, and 40 percent of truck tractor sales. The reporting component of the regulation requires large employers, including retailers, manufacturers, brokers and others, to report information about shipments and shuttle services. Fleet owners, with 50 or more trucks, would be required to report about their existing fleet operations.³ Because deliveries to and within the city would be made by trucks subject to this regulation, the Project would benefit from these measures.</p> <p>CARB is also developing the Innovative Clean Transit measure to encourage purchase of advanced technology buses such as alternative fueled or battery powered buses. This would allow fleets to phase in cleaner technology in the near future. CARB is also in the process of developing proposals for new approaches and strategies to achieve zero emission trucks under the Advanced Clean Local Trucks (Last Mile Delivery) Program.⁴ If and when such transit measures are adopted by CARB as regulatory standards, GHG emissions generated by transit trips to, from and within the city, including residents, employees, and other visitors, would be reduced in accordance with the future regulations.</p> <p>GHG emissions generated by passenger, truck, and bus vehicular travel as a result of future development under the proposed General Plan update would benefit from the above regulations and programs, and mobile source emissions would be reduced with implementation of standards under the Advanced Clean Cars Program, Advanced Clean Truck Regulation, and Innovative Clean Transit measure consistent with reduction of GHG emissions under SB 32. Mobile source GHG emissions provided in Table 3.7-4 conservatively do not</p>

Actions and Strategies	Responsible Party	Compliance/Consistency Analysis
		<p>specifically include the numeric reduction in mobile source GHG emissions from the above regulations as the EMFAC model, which was utilized in the Draft EIR, does not yet fully account for these regulation or programs.</p> <p>SB 375 requires SCAG to direct the development of the RTP/SCS for the region. The Project would not conflict with the RTP/SCS goal to adapt to a changing climate and to support an integrated regional development pattern. The location, design, and land uses of the growth anticipated by the Project would implement land use and transportation strategies related to reducing vehicle trips for residents and employees of the city by increasing commercial and residential density with over 95 percent of new residential development planned for multi-family dwelling units, which would allow for increased mixed-use density at infill locations and near public transit. Several transit agencies provide local and regional transit service to the residents of Carson, including Metro, Long Beach Transit, Compton Renaissance Transit, Gardena Transit, and Torrance Transit. Several routes in Carson provide access to the Metro A (Blue) Line, which passes through the eastern edge of Carson without stops. The Harbor Gateway Transit Center is located just west of the city, adjacent to I-110. This transit center is a stop on the Metro Silver Line, which provides critical regional access to downtown Los Angeles and east to the El Monte Station. Connection to the Transit Center is provided by Metro Lines 52 and 246. Both Long Beach Transit and Torrance Transit provide access to Long Beach, including the Long Beach Transit Gallery, located at the downtown Long Beach A Line station. Torrance Transit also provides access to the South Bay, including to the South Bay Galleria Transit Center and the Redondo Beach Pier. Refer to Table 3.15-2 in Section 3.15, <i>Transportation</i>, of this Draft EIR, for a summary of transit service in the city of Carson.</p> <p>The proposed General Plan update focuses on infill development and revitalization to help the city of Carson transition from a predominantly industrial and suburban community to a complete city with an integrated mix of housing, employment, educational, cultural, and recreational options balanced with industrial uses. These efforts are targeted in the Core and in centers around the Core, expanding on recent development along Carson Street. Development in the centers, along key corridors, and large opportunity sites such as the Shell property on East Del Amo Boulevard and South Wilmington Avenue are envisioned to be connected by community-oriented boulevards that feature public gathering spaces and pedestrian- and bicycle-oriented designs. New land use designations that introduce greater flexibility through emphasis on mixed uses instead of single uses are proposed to facilitate development to achieve this vision and respond to the need to accommodate the city's growing and diverse population.</p> <p>The proposed General Plan update outlines strategies for greater integration of uses in different parts of the city and a better connection between employment and residential uses, with more areas designated for mixed-use development. It recognizes the physical elements that help define the character of Carson, including existing residential neighborhoods, downtown Core, industrial/business centers, and corridors. This structure helps establish a clear multi-modal network throughout the city by focusing on both community destinations as well as the efficiency, safety, and convenience of the modes of transportation in between. Higher densities, especially in mixed-use designations, increase capacity for residential development near community-serving commercial, retail, and office uses as well as schools, parks, and recreational facilities, and proposed improvements to the bicycle, pedestrian, and road networks will make it easier for residents to travel throughout the community.</p>

Actions and Strategies	Responsible Party	Compliance/Consistency Analysis
Increase Stringency of SB 375 Sustainable Communities Strategy (2035 Targets).	CARB	<p>Therefore, the Project would not conflict with the VMT reduction standards of the RTP/SCS and the Project would not conflict with applicable RTP/SCS actions and strategies to reduce GHG emissions.</p> <p>No Conflict. Under SB 375, CARB sets regional targets for GHG emission reductions from passenger vehicle use. In 2010, CARB established targets for 2020 and 2035 for each region. As required under SB 375, CARB is required to update regional GHG emissions targets every 8 years, which have been most recently updated in 2018. As part of the 2018 updates, CARB adopted a passenger vehicle related GHG reduction of 19 percent per capita for 2035 for the SCAG region, relative to the baseline year 2005.</p> <p>As discussed above, the location, design, and land uses of the growth anticipated by the Project would implement land use and transportation strategies related to reducing vehicle trips for residents and employees of the city by increasing commercial and residential density with over 95 percent of new residential development planned for multi-family dwelling units, which would allow for increased mixed-use density at infill locations and near public transit. The proposed General Plan update outlines strategies for greater integration of uses in different parts of the city and a better connection between employment and residential uses, with more areas designated for mixed-use development. Higher densities, especially in mixed-use designations, increase capacity for residential development near community-serving commercial, retail, and office uses as well as schools, parks, and recreational facilities, and proposed improvements to the bicycle, pedestrian, and road networks will make it easier for residents to travel throughout the community. Therefore, the Project would not conflict with the VMT reduction standards of the RTP/SCS and the Project would not conflict with applicable RTP/SCS actions and strategies to reduce GHG emissions</p>
<p>By 2019, adjust performance measures used to select and design transportation facilities.</p> <ul style="list-style-type: none"> Harmonize project performance with emissions reductions, and increase competitiveness of transit and active transportation modes (e.g., via guideline documents, funding programs, project selection, etc.). 	CalSTA and SGC, OPR, CARB, GoBiz, IBank, DOF, CTC, Caltrans	<p>Not Applicable/No Conflict. The Project is a planning document, the approval of which would not directly result in the development of transportation facilities. However, the Project would encourage emission reduction strategies by establishing a land use design that would accommodate future growth in the city in higher density commercial and residential areas with over 95 percent of new residential development planned for multi-family dwelling units, which would allow for increased mixed-use density at infill locations and near multimodal public transit options. Therefore, the Project would not interfere, impede, or conflict with this strategy.</p>
<p>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).</p>	CalSTA, Caltrans, CTC, OPR/SGC, CARB	<p>No Conflict. The Project would support this policy through the implementation of proposed General Plan strategies for electric vehicle-ready and electric vehicle-capable parking spaces, as well as parking spaces for carpools and alternative fueled vehicles. As such, the Project would not conflict with this strategy.</p>
<p>Implement California Sustainable Freight Action Plan:</p> <ul style="list-style-type: none"> Improve freight system efficiency. Deploy over 100,000 freight vehicles and equipment capable of zero emission operation and maximize both zero and near-zero emission freight vehicles and equipment powered by renewable energy by 2030. 	CalSTA, CalEPA, CNRA, CARB, CalTrans, CEC, GoBiz	<p>Not Applicable/No Conflict. The Project is a planning document, the approval of which would not directly result in the development of freight transportation or warehousing uses. Nonetheless, the Project would support these actions through the implementation of proposed General Plan strategies for electric vehicle-ready and electric vehicle-capable infrastructure and parking spaces. As such, the Project would not conflict with this strategy.</p>

Actions and Strategies	Responsible Party	Compliance/Consistency Analysis
Adopt a Low Carbon Fuel Standard with a Carbon Intensity reduction of 18 percent.	CARB	<p>Not Applicable/No Conflict. This regulatory program applies to fuel suppliers, not directly to land use development planning projects, such as the Project. GHG emissions related to vehicular travel associated with future development under the proposed General Plan update would benefit from this regulation because fuel used by vehicles in the city would be required to comply with LCFS. Therefore, would not interfere, impede, or conflict with this strategy.</p> <p>On September 27, 2018, CARB approved an amendment to the LCFS regulation to require a 20 percent reduction in carbon intensity from a 2010 baseline by 2030. Reductions in carbon intensity are phased in starting in 2019 with a reduction of 6.25 percent and increases by 1.25 percent each year. Thus, in 2021, LCFS emissions reductions are 8.75 percent reduced carbon intensity relative to the 2010 baseline. Project-related mobile source GHG emissions would be reduced accordingly, and would increase as LCFS compliance increases to 20 percent to reduce carbon intensity by 2030 relative to the 2010 baseline year. Mobile source GHG emissions provided in Table 3.7-4 were calculated using EMFAC2021, and does not yet fully account for this regulation or program. Thus, Table 3.7-4 provides conservatively estimated GHG emissions.</p>
Other Sources		
<p>Implement the Short-Lived Climate Pollutant Strategy by 2030:</p> <ul style="list-style-type: none"> • 40-percent reduction in methane and hydrofluorocarbon emissions below 2013 levels. • 50-percent reduction in black carbon emissions below 2013 levels. 	CARB, CalRecycle, CDFR, SWRCB, Local air districts	<p>No Conflict. Senate Bill 605 (SB 605), adopted in 2014, directs CARB to develop a comprehensive Short-Lived Climate Pollutant (SLCP) strategy. Senate Bill 1383 was later adopted in 2016 to require CARB to set statewide 2030 emission reduction targets of 40 percent for methane and hydrofluorocarbons and 50 percent black carbon emissions below 2013 levels.⁵</p> <p>SB 1383 requires various agencies, including CARB, California Department of Food and Agriculture (CDFA), and the State Water Resources Board (SWRCB), to be responsible for adopting regulations to reduce GHG emissions. These regulations would be applicable to future development that could occur under the proposed General Plan update to the extent that new development would use these regulated compounds in accordance with regulations. Any such future development would be required to comply with applicable regulations from this CARB SLCP Reduction Strategy, with respect to adopted limits on the use of regulated compounds for refrigeration uses. Therefore, the Project would not conflict with this strategy.</p>
<p>By 2019, develop regulations and programs to support organic waste landfill reduction goals in the SLCP and SB 1383.</p>	CARB, CalRecycle, CDFR, SWRCB, Local air districts	<p>No Conflict. 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. As discussed in Section 3.17, <i>Utilities and Service Systems</i>, of the Draft EIR, future development that could occur under the proposed General Plan update would be consistent with AB 341, which requires not less than 75 percent of solid waste generated to be source reduced through recycling, composting, or diversion. This reduction in solid waste generated by the Project would reduce overall GHG emissions. Compliance with AB 341 would also help achieve the goals of SB 1383. Therefore, the Project would not conflict with this strategy.</p>

Actions and Strategies	Responsible Party	Compliance/Consistency Analysis
Implement the post-2020 Cap-and-Trade Program with declining annual caps.	CARB	No Conflict. 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. Under the Cap-and-Trade program, entities, such as power generation companies and natural gas processing plants, would be required to limit or reduce GHG emissions. While the Project is a land use development planning project and not a regulated entity under the Cap-and-Trade Program, the Program would result in a reduction of GHG emissions associated with the energy usage, since energy supplied to future development that could occur under the proposed General Plan update would be from a regulated entity. The Project would not interfere, impede, or conflict with implementation of the Program.
By 2018, develop Integrated Natural and Working Lands Implementation Plan to secure California’s land base as a net carbon sink: <ul style="list-style-type: none"> • 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. • 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. 	CNRA and departments within, CDFA, CalEPA, CARB	Not Applicable/No Conflict. This regulatory program applies to Natural and Working Lands. There are no Natural and Working Lands in the city. Thus, this strategy is not directly related to future development that could occur under the proposed General Plan update. However, the Project would not interfere, impede, or conflict with implementation of the Integrated Natural and Working Lands Implementation Plan.
Establish a carbon accounting framework for natural and working lands as described in SB 859 by 2018.	CARB	Not Applicable/No Conflict. This regulatory program applies to Natural and Working Lands. There are no Natural and Working Lands in the city. Thus, this strategy is not directly related to future development that could occur under the proposed General Plan update. However, the Project would not interfere, impede, or conflict with implementation of the Integrated Natural and Working Lands Implementation Plan.
Implement Forest Carbon Plan.	CNRA, CAL FIRE, CalEPA and departments within	Not Applicable/No Conflict. This regulatory program applies to state and federal forest land, not directly related to future development that could occur under the proposed General Plan update. However, the Project would not interfere, impede, or conflict with implementation of the Forest Carbon Plan.
Identify and expand funding and financing mechanisms to support GHG reductions across all sectors.	State Agencies & Local Agencies	Not Applicable/No Conflict. Funding and financing mechanisms are the responsibility of the state and local agencies. The Project would not conflict with funding and financing mechanisms to support GHG reductions.

¹ Senate Bill 350 (2015–2016 Regular Session) Stats 2015, Ch. 547.
² Southern California Edison, 2020. 2020 Sustainability Report, p. 81. <https://www.edison.com/content/dam/eix/documents/sustainability/eix-2020-sustainability-report.pdf>, accessed November 2021.
³ California Air Resources Board, 2017e. Advance Clean Cars, 2017 Midterm Review, <https://ww2.arb.ca.gov/resources/documents/2017-midterm-review-report>. Accessed May 18, 2021.
⁴ California Air Resources Board, 2021d. Advanced Clean Local Trucks, <https://ww2.arb.ca.gov/our-work/programs/advanced-clean-trucks>. Accessed May 18, 2021.
⁵ California Air Resources Board, 2019b. Short-Lived Climate Pollutants (SLCP): Organic Waste Methane Emissions Reductions, <https://www.calrecycle.ca.gov/climate/slcp/>. Accessed May 18, 2021.

SOURCE: Prepared by Environmental Science Associates.

Policy Executive Order S-3-05

Even though the state has not developed a clear regulatory and technological roadmap to achieve the statewide 2050 GHG emissions reduction goal of 80 percent below 1990 levels, it has demonstrated the potential pace at which emission reductions can be achieved through new regulations as well as technology and market developments. As part of the 2017 Climate Change Scoping Plan, CARB, CEC, CPUC, and the California Independent System Operator (CAISO) commissioned a study that evaluates the feasibility and cost of meeting the 2030 target along the way to reaching the state's 2050 GHG emissions reduction goal. The California State Agencies' PATHWAYS Project explores scenarios for meeting the state's long-term GHG emissions target, which affects all sectors of the California economy with detailed representations of the buildings, industry, transportation, and electricity sectors.⁶⁹ The PATHWAYS study acknowledges the inherent uncertainty associated with its modeling assumptions and emphasizes the need for continued action and policy development by the state to support the development of low-carbon technologies and markets for energy efficiency, building electrification, renewable electricity, zero-emission vehicles, and renewable fuels.

The PATHWAYS study was updated in 2018 and concludes that market transformation is needed to reduce the capital cost and to increase the range of options available in order to achieve high levels of consumer adoption of zero carbon technologies, particularly of electric vehicles and energy efficiency and electric heat in buildings. The PATHWAYS study suggests that market transformation can be facilitated by: (1) higher carbon prices (which can be created by the Cap and Trade and LCFS programs); (2) adoption of codes and standards, regulations, and direct incentives to reduce the upfront cost to the customer; and (3) business and policy innovations to make zero-carbon technology options the more affordable and preferred solutions compared to fossil fueled alternatives.⁷⁰ It is reasonable to expect the GHG emissions from future development anticipated by the Project would decline over time, as the regulatory initiatives identified by CARB in the 2017 Climate Change Scoping Plan and future updates to the Scoping Plan are developed and implemented, along with other technological innovations and market developments that occur. Given the reasonably anticipated decline in emissions, the Project would not conflict with or interfere with the ability of the state to achieve the 2050 horizon-year goal of EO S-3-05.

2020–2045 Regional Transportation Plan/Sustainable Communities Strategy

The purpose of the 2020–2045 RTP/SCS is to achieve the regional per capita GHG reduction targets for the passenger vehicle and light-duty truck sector established by CARB pursuant to SB 375. SCAG's Program EIR for the 2020–2045 RTP/SCS, certified on May 7, 2020, states that "[e]ach [metropolitan planning organization] is required to prepare an SCS as part of their RTP in order to meet these GHG emissions reduction targets by aligning transportation, land use, and housing strategies with respect to [Senate Bill] 375."⁷¹ The 2020–2045 RTP/SCS seeks improved

⁶⁹ Energy + Environmental Economics (E3), 2015. Summary of the California State Agencies' PATHWAYS Project: Long-term Greenhouse Gas Reduction Scenarios, https://www.arb.ca.gov/html/fact_sheets/e3_2030scenarios.pdf. Accessed November 12, 2021.

⁷⁰ E3, 2018. Deep Decarbonization in a High Renewables Future. Updated Results from the California PATHWAYS Model, Final Project Report, Deep Decarbonization in a High Renewables Future. Accessed November 12, 2021.

⁷¹ SCAG, 2020, *2020–2045 RTP/SCS*, September 2020.

mobility and accessibility, which is defined as “the ability to reach desired destinations with relative ease and within a reasonable time, using reasonably available transportation choices.”⁷² The 2020–2045 RTP/SCS seeks to implement strategies that “alleviates development pressure in sensitive resource areas by promoting compact, focused infill development in established communities with access to high-quality transportation.”⁷³ Furthermore, the 2020–2045 RTP/SCS includes “more compact, infill, walkable and mixed-use development strategies to accommodate new region’s growth” and “accommodate increases in population, households, employment, and travel demand.”⁷⁴ Moreover, the 2020–2045 RTP/SCS states that while “[t]ransportation emissions are most prevalent relative to all other sectors in California and specifically in the SCAG region,”⁷⁵ the RTP/SCS would focus “growth in existing urban regions and opportunity areas, where transit and infrastructure are already in place. Locating new growth near bikeways, greenways, and transit would increase active transportation options and the use of other transit modes, thereby reducing number of vehicle trips and trip lengths and associated emissions.”⁷⁶

In order to assess the Project’s potential to conflict with the 2020–2045 RTP/SCS, this section analyzes the proposed General Plan update’s consistency with the strategies and policies set forth in the 2020–2045 RTP/SCS to meet GHG emission-reduction targets set by CARB. Generally, projects are considered to not conflict with applicable City and regional land use plans and regulations, such as SCAG’s 2020–2045 RTP/SCS, if they are compatible with the general intent of the plans and would not preclude the attainment of their primary goals. The Project would not conflict with the 2020–2045 RTP/SCS goals as detailed in **Table 3.7-6, Consistency with Applicable 2020–2045 SCAG RTP/SCS Actions and Strategies.**

**TABLE 3.7-6
 CONSISTENCY WITH APPLICABLE 2020–2045 SCAG RTP/SCS ACTIONS AND STRATEGIES**

Actions and Strategies	Responsible Party(ies)	Compliance/Consistency Analysis
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	Local Jurisdictions, SCAG	No Conflict. The Project would not conflict with this action and strategy. The location, design, and land uses of the growth anticipated by the Project would implement land use and transportation strategies related to reducing vehicle trips for residents and employees of the city by increasing commercial and residential density with over 95 percent of new residential development planned for multi-family dwelling units, which would allow for increased mixed-use density at infill locations and near public transit. Several transit agencies provide local and regional transit service to the residents of Carson, including Metro, Long Beach Transit, Compton Renaissance Transit, Gardena Transit, and Torrance Transit. Several routes in Carson provide access to the Metro A (Blue) Line, which passes through the eastern edge of Carson without stops. The Harbor Gateway Transit Center is located just west of the city, adjacent to I-110. This transit center is a stop on the Metro Silver Line, which provides critical regional access to downtown Los Angeles and east to the El Monte Station. Connection to the Transit Center is provided by Metro Lines 52 and 246. Both Long Beach

⁷² SCAG, 2020, *2020–2045 RTP/SCS*, September 2020.
⁷³ SCAG, 2020, *2020–2045 RTP/SCS*, September 2020.
⁷⁴ SCAG, 2020, *2020–2045 RTP/SCS*, September 2020.
⁷⁵ SCAG, 2020, *2020–2045 RTP/SCS*, September 2020.
⁷⁶ SCAG, 2020, *2020–2045 RTP/SCS*, September 2020.

Actions and Strategies	Responsible Party(ies)	Compliance/Consistency Analysis
<p>Prioritize infill and redevelopment of underutilized land to accommodate new growth, increase amenities and connectivity in existing neighborhoods</p>	<p>Local Jurisdictions, SCAG</p>	<p>Transit and Torrance Transit provide access to Long Beach, including the Long Beach Transit Gallery, located at the downtown Long Beach A Line station. Torrance Transit also provides access to the South Bay, including to the South Bay Galleria Transit Center and the Redondo Beach Pier. Refer to Table 3.15-2 in Section 3.15, <i>Transportation</i>, of this Draft EIR, for a summary of transit service in the city of Carson.</p> <p>The proposed General Plan update focuses on infill development and revitalization to help the city of Carson transition from a predominantly industrial and suburban community to a complete city with an integrated mix of housing, employment, educational, cultural, and recreational options balanced with industrial uses. These efforts are targeted in the Core and in centers around the Core, expanding on recent development along Carson Street. Development in the centers, along key corridors, and large opportunity sites such as the Shell property on East Del Amo Boulevard and South Wilmington Avenue are envisioned to be connected by community-oriented boulevards that feature public gathering spaces and pedestrian- and bicycle-oriented designs. New land use designations that introduce greater flexibility through emphasis on mixed uses instead of single uses are proposed to facilitate development to achieve this vision and respond to the need to accommodate the city's growing and diverse population.</p> <p>No Conflict. The Project would not conflict with this action and strategy. The proposed General Plan update focuses on infill development and revitalization to help the city of Carson transition from a predominantly industrial and suburban community to a complete city with an integrated mix of housing, employment, educational, cultural, and recreational options balanced with industrial uses. These efforts are targeted in the Core and in centers around the Core, expanding on recent development along Carson Street. Development in the centers, along key corridors, and large opportunity sites such as the Shell property on East Del Amo Boulevard and South Wilmington Avenue are envisioned to be connected by community-oriented boulevards that feature public gathering spaces and pedestrian- and bicycle-oriented designs. New land use designations that introduce greater flexibility through emphasis on mixed uses instead of single uses are proposed to facilitate development to achieve this vision and respond to the need to accommodate the city's growing and diverse population.</p>
<p>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)</p>	<p>Local Jurisdictions, SCAG</p>	<p>No Conflict. The Project would not conflict with this action and strategy. As discussed above, the proposed General Plan update would increase commercial and residential density with over 95 percent of new residential development planned for multi-family dwelling units, which would allow for increased mixed-use density at infill locations and near public transit. Refer to Table 3.15-2 in Section 3.15, <i>Transportation</i>, of this Draft EIR, for a summary of transit service in the city of Carson.</p> <p>The proposed General Plan update focuses on infill development and revitalization to help the city of Carson transition from a predominantly industrial and suburban community to a complete city with an integrated mix of housing, employment, educational, cultural, and recreational options balanced with industrial uses.</p>

Actions and Strategies	Responsible Party(ies)	Compliance/Consistency Analysis
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	Local Jurisdictions, SCAG	<p>No Conflict. The Project would not conflict with this action and strategy and would support these actions through the implementation of General Plan strategies for electric vehicle-ready and electric vehicle-capable infrastructure and parking spaces. Furthermore, the proposed General Plan update targets growth in the Core and in centers around the Core, expanding on recent development along Carson Street. Development in the centers, along key corridors, and large opportunity sites such as the Shell property on East Del Amo Boulevard and South Wilmington Avenue are envisioned to be connected by community-oriented boulevards that feature public gathering spaces and pedestrian- and bicycle-oriented designs.</p> <p>Additionally, the City is expanding its bicycle and pedestrian networks as proposed in the City’s Master Plan of Bikeways and the existing General Plan. Given that trips of many different purposes can be completed using a bicycle, this strategy would help reduce VMT. The City is already designing or implementing bikeway improvements as listed in Table 3.15-7 of Section 3.15, <i>Transportation</i>, of this Draft EIR. The Project would not conflict with implementation of the bikeway improvements.</p>
Identify ways to incorporate “micro-power grids” in communities, for example solar energy, hydrogen fuel cell power storage and power generation	Local Jurisdictions, SCAG	<p>No Conflict. The Project would not conflict with this action and strategy. The operation of new development that could occur from adoption of the proposed General Plan update would be designed in a manner that is consistent with relevant energy conservation plans designed to encourage development that results in the efficient use of energy resources. New development would comply with Title 24 requirements and CALGreen to reduce energy consumption by implementing energy efficient building designs, pre-wiring residences with electric vehicle charging ports, and implementing solar-ready rooftops.</p>
Support local policies for renewable energy production, reduction of urban heat islands and carbon sequestration	Local Jurisdictions, SCAG	<p>No Conflict. The Project would not conflict with this action and strategy. The operation of new development that could occur from adoption of the proposed General Plan update would be designed in a manner that is consistent with relevant energy conservation plans designed to encourage development that results in the efficient use of energy resources. New development would comply with Title 24 requirements and CALGreen to reduce energy consumption by implementing energy efficient building designs, pre-wiring residences with electric vehicle charging ports, and implementing solar-ready rooftops.</p> <p>Additionally, as discussed in Section 3.3, <i>Biological Resources</i>, of this Draft EIR, the City manages all aspects of parkway trees to maintain the natural environment of the community. Article III, Public Safety, Chapter 9, City Tree Preservation and Protection, of the Carson Municipal Code outlines all the management practices of the City, best management practices (BMPs) for contractors, and penalties for violations of the Carson Municipal Code. No one is allowed to work on a parkway tree in the city without obtaining a permit first and must follow the guidelines discussed in the Carson Municipal Code. A City of Carson Public Works Division Application for Permit to Remove Street Trees is required prior to the removal of any trees that meet the definitions described in the Carson Municipal Code. Furthermore, the proposed General Plan update would include proposed goals and policies in the Open Space and Environmental Conservation Element for enhancing and expanding the tree canopy on public and private property throughout the community.</p>

Actions and Strategies	Responsible Party(ies)	Compliance/Consistency Analysis
Identify ways to improve access to public park space	Local Jurisdictions	No Conflict. The Project would not conflict with this action and strategy. The Project would improve connectivity and land use consistency within and between existing neighborhoods, thereby providing more linkages within the city and the region. The proposed General Plan update would plan for higher densities, especially in mixed-use designations, increased capacity for residential development near community-serving commercial, retail, and office uses as well as schools, parks, and recreational facilities, and proposed improvements to the bicycle, pedestrian, and road networks will make it easier for residents to travel throughout the community.
Transportation Demand Management (TDM) Strategic Plan provide an objectives-driven, performance-based process to identify and promote TDM strategies and programs across the region. SCAG will pursue implementation of these strategies in coordination with regional and local partners.	Local Jurisdictions	No Conflict. The Project would not conflict with this action and strategy and would include policies that support TDM strategies, such as proposed General Plan policies in the Circulation Element (refer to Section 3.15, <i>Transportation</i> , of this Draft EIR, for a list of the proposed policies).

SOURCE: Prepared by Environmental Science Associates.

City of Carson Climate Action Plan

Through the City’s CAP, the City of Carson has established goals and strategies that would reduce GHG emissions. The CAP reduction measures primarily focus on ways to reduce energy as energy usage accounted for 70 percent of all city GHG emissions in 2012. As outlined in the CAP, the City is focusing on increasing energy efficiency and reducing GHG emissions from energy to meet attainment goals. In addition to CAP energy efficiency goals, utility providers (such as SCE) are required to provide 60 percent of their electricity supply from renewable sources by the year 2030, further reducing the demand on nonrenewable sources.

The City’s CAP identifies community-wide strategies to lower energy use. Energy reductions within the CAP are from transportation, land use, energy generation and consumption, water consumption and waste generation. The proposed General Plan update incorporates CAP goals and policies for energy efficiency and renewable energy, including electric vehicle charging, which would source transportation energy from renewable sources in accordance with the RPS. Future development that could occur under the proposed General Plan update would comply with CALGreen energy-efficiency requirements, which would be consistent with CAP goals for increasing energy and water use efficiency in new residential and commercial developments. Thus, new development under the proposed General Plan update would incorporate CAP goals and policies as part of future development approvals and would not result in conflicts with the plan.

Through the City’s EECAP, the City of Carson has established goals and strategies that would reduce energy use. The EECAP focuses on increasing energy efficiency and reducing GHG emissions from energy to meet attainment goals. In addition to EECAP energy efficiency goals, utility providers (such as SCE) are required to provide 60 percent of their electricity supply from renewable sources by the year 2030 per SB 100, further reducing the GHG intensity of supplied

electricity. New development under the proposed General Plan update would comply with CALGreen energy-efficiency requirements, which would be consistent with EECAP goals for increasing energy and water use efficiency in new residential and commercial developments.

Based on the information above, new development under the proposed General Plan update would comply with plans, policies and regulations for reducing GHG emissions and this impact would be less than significant.

Proposed General Plan Policies that Address the Impact

Land use and Revitalization

Guiding Policies

- LUR-G-2 Balance employment and housing within the community to provide more opportunities for Carson residents to work locally, cut commute times, and improve air quality.
- LUR-G-4 Promote a diversity of complementary uses in different parts of the city, including mixed flexible office space, retail, dining, residential, hotels, and other compatible uses, to foster vibrant, safe, and walkable environments, with flexibility to accommodate emerging uses and building typologies.
- LUR-G-6 Encourage revitalization of corridors as pedestrian-oriented, mixed-use residential, retail, and office community spines, serving as focal points for neighborhood amenities and services, and helping foster neighborhood identity and vitality.
- LUR-G-7 Develop Carson’s central Core—extending approximately 1.7 miles both east-west along West Carson Street and north-south along Avalon Boulevard and including the South Bay Pavilion—into a vibrant, pedestrian-oriented mixed-use hub of the community, with housing, retail, and other commercial uses, and civic uses and community gathering spaces.
- LUR-G-9 Locate medium and high-density development along major corridors and major re-development sites in the central Core, to focus housing near regional access routes, transit stations, employment centers, shopping areas, and public services.
- LUR-G-11 Encourage mixed-use development (two or more uses within the same building or in close proximity on the same site), especially in the Core area, to promote synergies between uses.

Implementing Policies

- LUR-P-1 Where feasible, locate higher density residential uses in proximity to job centers and commercial centers in order to discourage long commute times and encourage pedestrian traffic and provide a consumer base for commercial uses.
- LUR-P-8 Promote development of neighborhood-scaled commercial centers in residential areas to serve the everyday needs of nearby residents.
- LUR-P-11 Promote ground level commercial uses to foster pedestrian activity and visual engagement and provide commercial uses to serve residents of surrounding neighborhoods. Where commercial uses are or were present as of 2021, at least

half of the commercial area shall be retained or replaced as part of new development. Where more than 0.1 FAR ground level active commercial uses are provided (new or through replacement), the City may grant residential density increase up to 60 percent on a graduated scale as specified in the Zoning Ordinance and Table 2-2.

- LUR-P-12 Prohibit uses in the Core (as shown in Figure 2-3) that do not add to a strong pedestrian character, such as warehouses, gas stations, drive-through establishments, industrial, and other new development whose design prioritizes automobile access.
- LUR-P-13 Focus new residential, commercial and employment-generating land uses along Carson Street and Avalon Boulevard in order to support higher-frequency transit service. Provide adequate infrastructure, such as bus lanes or bus shelters at bus stops, to support transit service usage.
- LUR-P-16 Where larger parcels—such as the Shell site—are redeveloped, require development to implement urban design policies, including creation of smaller blocks (typically with no dimension larger than 300 to 600 feet dependent on use, with smaller blocks in residential areas) to create walkable, urban environments; buildings and landscapes that relate to the surroundings, with high-level of public-realm amenities, such as tree-lined streets; sidewalks, pedestrian paths, and crossings; and plazas and other gathering spaces for workers and visitors. Site planning for new construction should ensure that streets are lined with occupied buildings or landscapes, with parking and service facilities tucked behind or away from public streets.
- LUR-P-18 Promote infill mixed-use development in either a vertical or horizontal configuration when aging shopping centers are redeveloped to create mixed-use corridors with a range of housing types at mid-to-high densities along their lengths and activity nodes at key intersections with retail/commercial uses to serve the daily needs of local residents.
- This policy applies to areas that are designated as Corridor Mixed Use or Downtown Mixed Use, such as within the city's Core and Carson Plaza near the [California State University, Dominguez Hills] CSU-DH campus.*
- LUR-P-24 Promote the development of sites designated as Business Residential Mixed Use (BRMU) with a vibrant mix of business and residential uses that include:
- For the Shell site, require at least a minimum of 25 acres of open space, 18 of which as a centralized park or open space and seven acres along the western border of the property as a Greenway Corridor/buffer. Exact locations and acreages should be specified during project planning.
 - For the Shell site, require at least a minimum nine acres of General Commercial at the south-west corner of Del Amo Boulevard and Wilmington Avenue or at a centralized location. Other commercial uses are encouraged throughout the site as mixed-use development.
 - Encourage residential development with a range of housing types, and technology, research and development, and office uses if determined to be suitable from an environmental perspective.

- Require development to be connected to the surroundings, with through streets, and walkable urban design patterns. See additional policies in Chapter 4: Community Character, Identity, and Design Element.
- When housing is proposed adjacent to industrial uses, require the development of a cohesive master or specific plan to include surrounding property owners to ensure compatibility. The Shell site is required to have a similar plan to outline long-term growth of the site.

Circulation Element

Guiding Policies

- CIR-G-1 Provide a balanced transportation system of multimodal networks providing a broad range of travel options to make transportation convenient, comfortable, and safe for people of all abilities.
- CIR-G-2 Promote bicycling and walking, and support and improve connections to local and regional transit service.
- CIR-G-3 Manage the transportation network to minimize roadway congestion, while balancing traffic Level of Service (LOS) objectives with promoting reduction in vehicle miles traveled and considerations of community character and design.
- CIR-G-4 Encourage the development of a multimodal freight transportation system that balances the need for effective and efficient transportation of goods with the health and wellbeing of the community.

Implementing Policies

- CIR-P-1 Update the City’s Bicycle Plan, identifying a citywide bicycle network of off-street bike paths, on-street bike lanes and bike streets. As part of the plan, consider bicycle lockers, secure bike parking, pavement condition, and access to transit, parks, and schools throughout the city. The update of the Bicycle Plan should strategically identify projects that will improve equity, the environment, reduce trips on the roadway system, and prioritize projects that align with primary local active transportation grant funding programs including Metro, SCAG, and Caltrans.
- CIR-P-2 Develop a First Last Mile Plan to improve walking and biking connections to future and existing transportation hubs.
- CIR-P-3 Establish bike hubs (centralized locations with convenient bike parking for trip destinations or transfer to other transportation modes), at key transit nodes or commercial nodes.
- CIR-P-4 Evaluate opportunities, such as new development or changes to the transit network, to enhance existing and proposed Class II bike lanes and Class III bike routes to protected bike lanes and bike routes to bike lanes or bike boulevards.
- CIR-P-16 Work with Long Beach Transit to serve local neighborhoods and connect residences with shopping, employment, transit, and recreational opportunities.

- CIR-P-17 Participate in and encourage collaboration among adjacent cities to provide a more reliable public transportation system the area.
- CIR-P-19 Work with regional transit services to develop an on-demand transportation system that caters to senior populations and people with disabilities.
- CIR-P-20 Evaluate and adjust transit routes to better connect disadvantaged communities with major transit hubs and key destinations such as parks, schools, and healthy food opportunities.
- CIR-P-21 Work with transit providers in the city to implement public transportation improvements and enhance first-last mile connections at highly utilized transit stops.
- CIR-P-22 Develop a transportation demand management (TDM) ordinance. A TDM ordinance would incorporate strategies appropriate for the local context and land use as different strategies are more effective at reducing employee commute trips, while others focus on reducing residential, shopping, or other discretionary trips. Strategies will generally focus on land use, parking, transit, and active transportation.
- CIR-P-23 Pursue the implementation of TDM strategies through application of the City’s Transportation Study Guidelines and compliance with Senate Bill 743 that seeks to reduce per capita VMT for residential, retail, and office trips.
- CIR-P-24 Encourage local public agencies and employers to implement TDM policies that promote VMT reductions. The research in this area is regularly evolving and can help identify viable and defensible VMT reduction strategies.
- CIR-P-25 Evaluate the potential for strategies that can reduce VMT such as citywide bike-sharing, promote car-sharing and other electrified modes as options to reduce traffic congestion.
- CIR-P-26 Prioritize and identify disadvantaged community locations to develop sustainable mobility hubs that include car-sharing, bike-sharing and public EV charging infrastructure to minimize traffic and air quality effects.
- CIR-P-27 Require all new and substantially renovated office, retail, industrial, and multi-family developments to provide EV charging infrastructure and EV ready parking.
- CIR-P-32 Enhance infrastructure to accommodate last mile delivery services for low carbon solutions, such as last mile bicycle delivery.
- CIR-P-33 Promote the deployment of near-zero and zero-emissions trucks for urban deliveries, port drayage trips, regional, and long-haul trips by providing charging infrastructure and plug-in technologies for extended idling.
- CIR-P-34 Encourage deployment of alternative-fueled vehicles through advancement of new technologies, such as autonomous vehicles that are anticipated to be a pathway to electric vehicles.

Community Health and Environmental Justice

Guiding Policies

CHE-G-8 Improve bike, pedestrian, and transit connectivity to community facilities and services, especially in underserved areas.

Implementing Policies

CHE-P-5 Recognize and actively promote policies to create a multimodal transportation system that reduces solo driving.

Open Space and Environmental Conservation

Guiding Policies

OSEC-G-19 Seek to reduce mobile sources of air pollution by creating denser and walkable neighborhoods, promoting transit-oriented development, and improving bicycle infrastructure, with the goal to reduce the number of miles traveled in cars and improve regional air quality.

OSEC-G-22 Promote clean and alternative fuel combustion in City-owned mobile equipment and vehicles.

OSEC-G-23 Undertake initiatives outlined in the Climate Action Plan to enhance sustainability by reducing the community's greenhouse gas (GHG) emissions and fostering green development patterns—including buildings, sites, and landscapes.

OSEC-G-24 Incorporate green infrastructure design in new projects to promote sustainability in the built environment.

Green infrastructure is the use of open spaces, permeable pavement, street tree rain gardens, and other natural approaches to capture infiltrate, and reuse rainwater. As opposed to single-purpose gray stormwater infrastructure—conventional piped drainage and water treatment systems—which is designed to move urban stormwater away from the built environment, green infrastructure reduces and treats stormwater at its source thus reducing strain on infrastructure while delivering environmental, social, and economic benefits.

OSEC-G-25 Demonstrate leadership by reducing the use of energy and fossil fuel consumption in municipal operations, including transportation, waste and water reduction, recycling, and by promoting efficient building design and use.

OSEC-G-26 Plan for extreme weather events by incorporating the potential effects and threats of climate change into emergency management planning.

OSEC-G-27 Reduce the impacts of extreme heat events resulting from global warming and climate change by diminishing urban heat island effects. Explore heat mitigation strategies including planting trees, limiting the use of heat-absorbing pavement, encouraging use of cool roofs and reflective pavements, and providing cooling elements in public spaces such as shade structures and water features.

Heat islands are urbanized areas that experience higher temperatures than outlying areas. Structures such as buildings, roads, and other infrastructure

absorb and re-emit the sun's heat more than natural landscapes such as forests and water bodies. Urban areas, where these structures are highly concentrated and greenery is limited, become "islands" of higher temperatures relative to outlying areas. Daytime temperatures in urban areas are about 1–7°F higher than temperatures in outlying areas and nighttime temperatures are about 2-5°F higher.

- OSEC-G-28 Promote sustainable practices and environmental remediation for heavy industrial areas and seek to reduce trucking emissions.

Implementing Policies

- OSEC-P-34 Continue to encourage and assist employers in developing and implementing work trip reduction plans, employee ride sharing, modified work schedules, preferential carpool and vanpool parking, or any other trip reduction approach that is consistent with the SCAQMD.
- OSEC-P-43 Support SCAQMD efforts to reduce transportation-related emissions, including electric charging requirements for buildings including warehouses and truck idling restrictions.
- OSEC-P-46 Continue to implement strategies to reduce government operation emissions, including City employee work trip reduction programs, work from home options, and use of alternative fuel vehicles. Strive to have the City-owned vehicle fleet to be 100 percent electric or alternative fuel by 2040 or sooner.
- OSEC-P-49 Use the City's development review process and the California Environmental Quality Act (CEQA) regulations or strategies and measured outlined in the CAP to evaluate and mitigate the local and cumulative effects of new development on air quality and GHG emissions.
- OSEC-P-51 Use the CAP as the City's primary strategy to reduce GHG emissions, including strategies related to land use and transportation, energy efficiency, solid waste, urban greening, and energy generation and storage.
- OSEC-P-52 Update the City's Climate Action Plan as needed to synchronize GHG reduction targets with new state mandates and to incorporate new technology and strategies.
- OSEC-P-53 Require all new or substantially renovated gas stations to provide electric-charging stations and be future-ready to switch to electric charging stations only in future.
- OSEC-P-54 Outline a plan of mobile source enforcement methods, such as periodic mobile source (e.g., trucks) checkpoints, along major truck routes throughout the city to enforce emission opacity regulations. Technical assistance can be sought from California Air Resources Board (CARB) and the California Highway Patrol (CHP) on enforcement issues.
- OSEC-P-55 Enforce CARB's idling reduction strategies that requires school buses and other heavy-duty vehicle operators to turn off their engines if they are idling more than five minutes. Focus enforcement near schools, residential areas, and other sensitive uses as well as heavy truck trafficked areas. Further, design

traffic plans, including the development of suggested routes, to minimize diesel truck idling.

OSEC-P-56 To reduce transportation-related GHG emissions, promote active modes of transportation including transit, bicycling, and walking by providing infrastructure that supports each of these networks, such as adding or expanding bicycle lanes, exploring use of sidewalk bulb outs, increasing bus service frequency, and exploring multimodal connectivity between these types of transportation.

This topic is also covered in depth in Chapter 3: Transportation and Connectivity.

OSEC-P-57 Facilitate energy efficiency in building regulations, providing flexibility to achieve specified energy performance levels and requiring energy efficiency measures as appropriate.

OSEC-P-58 Support sustainability measures to reduce and conserve municipal and private energy uses, especially from commercial and industrial uses which consume 78 percent of the city's total electric usage.

OSEC-P-59 Coordinate with the business and industrial community to encourage energy efficiency in the city's largest energy users while supporting economic growth objectives.

OSEC-P-60 Support efforts to enhance Carson's urban forestry to help reduce ambient temperatures and an opportunity for residents to enjoy outdoor spaces by providing ecological benefits such as shade and some air filtration, in addition to economic benefits.

OSEC-P-61 Seek opportunities for funding and provide incentives to promote siting or use of clean air technologies (e.g., fuel cell technologies, renewable energy sources, UV coatings, hydrogen fuel).

Mitigation Measures

None required.

3.7.5 Cumulative Impact Analysis

Analysis of GHG emissions is cumulative in nature because impacts are caused by cumulative global emissions and additionally, climate change impacts related to GHG emissions do not necessarily occur in the same area as a project is located. The emission of GHGs by a single development project into the atmosphere is not itself necessarily an adverse environmental effect. Rather, it is the increased accumulation of GHGs from more than one project and many sources in the atmosphere that may result in global climate change. The resultant consequences of that climate change can cause adverse environmental effects. A project's GHG emissions typically would be very small in comparison to state or global GHG emissions and, consequently, they would, in isolation, have no significant direct impact on climate change.

The state has mandated a GHG emissions target of reducing statewide emissions to 40 percent below 1990 levels by 2030, and 80 percent below 1990 levels by 2050 even while statewide population and commerce are predicted to continue to expand. In order to achieve this goal, CARB has established and is implementing regulations to reduce statewide GHG emissions. Currently, there are no adopted CARB, SCAQMD, or City significance thresholds or specific numeric reduction targets applicable to the Project, and no approved policy or guidance to assist in determining significance at the cumulative level. Additionally, there is currently no generally accepted methodology to determine whether GHG emissions associated with a specific project represent new emissions or existing, displaced emissions. Therefore, consistent with CEQA Guidelines Section 15064h(3),⁷⁷ the City, as lead agency, has determined that the Project's contribution to cumulative GHG emissions and global climate change would be less than significant if the Project is consistent with the applicable regulatory plans and policies to reduce GHG emissions: Climate Change Scoping Plan, SCAG's 2020–2045 RTP/SCS, and CAP. Given that the Project would not conflict with applicable GHG reduction plans, policies, and regulations, emissions associated with future development that could occur under the proposed General Plan update would be less than significant on a cumulative basis.

⁷⁷ As indicated above, the CEQA Guidelines were amended in response to SB 97. In particular, the CEQA Guidelines were amended to specify that compliance with a GHG emissions reduction program renders a cumulative impact insignificant. Per CEQA Guidelines Section 15064(h)(3), a proposed project's incremental contribution to a cumulative impact can be found not cumulatively considerable if a proposed project will comply with an approved plan or mitigation program that provides specific requirements that will avoid or substantially lessen the cumulative problem within the geographic area of a project. To qualify, such a plan or program must be specified in law or adopted by the public agency with jurisdiction over the affected resources through a public review process to implement, interpret, or make specific the law enforced or administered by the public agency. Examples of such programs include a "water quality control plan, air quality attainment or maintenance plan, integrated waste management plan, habitat conservation plan, natural community conservation plan, [and] plans or regulations for the reduction of greenhouse gas emissions."

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3.8 Hazards and Hazardous Materials

3.8.1 Introduction

This section provides an analysis of potential environmental impacts from future development allowed under the Project, including those associated with the use, transportation, storage, or disposal of hazardous materials; hazardous materials use within the vicinity of a school; hazardous materials sites; airport hazards; emergency response planning; and wildland fire hazards. For discussion of geologic and seismic hazards, see Section 3.6, *Geology and Soils*, of this Draft EIR. For discussion of hydrologic and flood hazards, see Section 3.9, *Hydrology and Water Quality*, of this Draft EIR. For a discussion of air quality hazards, see Section 3.2, *Air Quality*, of this Draft EIR.

Comments received in response to the Notice of Preparation (NOP) and Recirculated NOP regarding topics covered in this section include the following:

- The Draft EIR should address impacts related to fuel modification for Very High Fire Hazard Severity (VHFHSZ) Zones or Fire Zone 4.

3.8.2 Environmental Setting

Hazardous Materials

Definition of Hazardous Materials and Hazardous Waste

Definitions of terms used in the characterization of baseline conditions, regulatory framework, and impact analysis for hazards and hazardous materials are provided below.

- **Hazardous Material:** The term “hazardous material” can have varying definitions depending on the regulatory programs. For the purposes of this Draft EIR, the term refers to both hazardous materials and hazardous wastes. The California Health and Safety Code Section 25501(p) defines hazardous material 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 the environment.
- **Hazardous Waste:** A “hazardous waste” is a waste that because of its quantity, concentration, or physical, chemical, or infectious characteristic, causes or significantly contributes to an increase in mortality or illness or poses substantial or potential threats to public health or the environment (42 U.S.C. 6903(5)). Hazardous wastes are further defined under the Resource Conservation and Recovery Act (RCRA) as substances exhibiting the characteristics of ignitability, reactivity, corrosivity, or toxicity. Chemical-specific concentrations used to define whether a material is a hazardous, designated, or nonhazardous waste include Total Threshold Limit Concentrations (TTLCs), Soluble Threshold Limit Concentrations (STLCs), and Toxic Characteristic Leaching Procedure (TCLPs), listed in California Code of Regulation (CCR) Title 22, Chapter 11, Article 3, Section 66261, and used as waste acceptance criteria for landfills. Waste materials with chemical concentrations above TTLCs, STLCs, and TCLPs must be sent to Class I disposal facilities, may be sent to

Class II disposal facilities depending on the waste material, and may not be sent to Class III disposal facilities.

- **Screening Levels for Hazardous Materials in Soil, Soil Gas, or Groundwater:** The U.S. Environmental Protection Agency (USEPA) Regional Screening Levels (RSLs) and San Francisco Bay Area Regional Water Quality Control Board (RWQCB) Environmental Screening Levels (ESLs) are guidelines used to evaluate the potential risk associated with chemicals found in soil or groundwater where a release of hazardous materials has occurred. Although developed and maintained by the San Francisco Bay Area RWQCB, ESLs are used by regulatory agencies throughout the state.¹ Screening levels have been established for both residential and commercial/industrial land uses, and for construction workers. Residential screening levels are the most restrictive; soil with chemical concentrations below these levels generally would not require remediation and would be suitable for unrestricted uses if disposed of offsite. Commercial/industrial screening levels are generally less restrictive than residential screening levels because they are based on potential worker exposure to hazardous materials in the soil (and these are generally less than residential exposures). Screening levels for construction workers are also less restrictive than for commercial/industrial workers because construction workers are only exposed to the chemical of concern during the duration of construction, while industrial workers are assumed to be exposed over a working lifetime. Chemical concentrations below these screening levels generally would not require remediation and would be suitable for unrestricted uses. In addition, there are other more specific but similar screening levels used more narrowly focused human health or ecological risk assessment considerations.

Regulation of hazardous wastes is undertaken on the federal, state, and local levels. The USEPA and the California Department of Toxic Substances Control (DTSC) have developed and continue to update lists of hazardous wastes subject to regulation. The South Coast Air Quality Management District (SCAQMD), in coordination with the California Air Resources Board (CARB), is responsible for developing and implementing rules and regulations regarding air toxins on a local level. The SCAQMD establishes permitting requirements, inspects emissions sources, and enforces measures through educational programs and/or fines. The City of Carson (City) has adopted the Los Angeles County Hazardous Waste Management Plan, which provides policies and programs to address hazardous waste management issues. The Los Angeles County Fire Department (LACFD), under the Health Hazards Division, is responsible for inspection of hazardous materials and/or waste generating businesses, criminal investigations, site mitigation oversight and emergency response in the city of Carson.

Hazardous Materials Storage and Use Facilities

Hazardous materials facilities are those active sites that are currently permitted to use and/or store hazardous materials. Hazardous materials facilities that use and/or store hazardous materials are regulated by the local Certified Unified Program Agency (CUPA), which for the city of Carson is the LACFD Health Hazardous Materials Division (HHMD). The LACFD HHMD is charged with the responsibility of conducting compliance inspections of hazardous materials facilities in Los Angeles County, including within the city of Carson. These facilities handle hazardous materials, generate or treat hazardous waste, and/or operate underground storage tanks. Facilities are required to disclose all hazardous material and waste above certain designated quantities that are

¹ The San Francisco Bay Area RWQCB develops ESLs for the use of all California RWQCBs.

used, stored, or handled at their facility. The quantities that trigger disclosure are based on the maximum quantity on site at any time:

- 55 gallons, 500 pounds, or 200 cubic feet for 30 days or more at any time in the course of a year
- Any amount of hazardous waste
- Category I or II pesticides
- Explosives
- Extremely hazardous substances above the threshold planning quantity

The CUPA uses education and enforcement programs to minimize the risk of chemical exposure to human health and the environment. The CUPA forwards important facility information to local fire prevention agencies that enables them to take appropriate protective actions in the event of an emergency at regulated facilities. The Los Angeles County CUPA program elements include:

- Hazardous Materials Release Response Plans and Inventory (Business Plans)
- California Accidental Release Program (CalARP)
- Underground Storage Tanks (UST)
- Aboveground Petroleum Storage Spill Prevention Control and Countermeasures (SPCC)
- Hazardous Waste Generation and Onsite Treatment

Those businesses that exceed the above listed quantities are required to submit a Hazardous Materials Release Response Plan and Inventory, more commonly known as a Hazardous Materials Business Plan or HMBP. The CUPA program includes sites that store hazardous materials in USTs. As of October 4, 2021, there were 49 active permitted UST facilities within or near the city limits, as listed in **Table 3.8-1, DTSC EnviroStor Sites in the City of Carson.**

In the event that a hazardous materials release occurs, the investigation and cleanup of the release is regulated by the Los Angeles Count HHMD, RWQCB, or DTSC, depending on the nature of the release. Sites that are currently under investigation are discussed below.

Listed Hazardous Materials Release Sites

Active hazardous materials sites are those sites that are currently under investigation by regulatory agencies. The investigations and cleanups will be guided by the use of screening levels, such as those previously described, to determine when a given site has been cleaned up to within acceptable risk levels. Once achieved, a given site is typically issued a no further action letter or the equivalent, and the case is closed; the regulatory agency will not require further investigation or cleanup. Note that this does not mean that a closed site necessarily has no levels of the chemicals that prompted the investigation. Residual levels of chemicals may remain in soil and/or groundwater at concentrations below the screening levels used to justify closing the site investigation.

**TABLE 3.8-1
 DTSC ENVIROSTOR SITES IN THE CITY OF CARSON**

Facility Name	Facility Address	Status
State Response Sites		
Golden Eagle Refinery (Former)	12000 South Figueroa St.	Active – Land Use Restrictions
Monsanto Chemical Company	2100 East 223rd St.	Active
Victoria Golf Course (Former BKK Carson Dump)	340 East 192nd St.	Active
Stauffer Chemical Carson	2112 East 223rd St.	Active – Land Use Restrictions
Manville Corporation	2420 East 223rd St.	Certified O&M – Land Use Restrictions Only – Land Use Restrictions
Cal Compact Landfill	20400 Main St.	Active
Alco Pacific, Inc.	16914 South Broadway	Certified/Operation & Maintenance
Moen Foam Company	16627 Avalon Blvd.	Backlog
Voluntary Cleanup Sites		
Broadway & Main	19101–19145 S. Broadway	Active
Carson Plaza	641 East University Drive	Active
Coons Trust Property	2254 E. 223rd Street	Certified Operations & Maintenance – Land Use Restrictions
Dominguez Golf Course & Adjacent Property	19800 South Main Street	Active
Gardena Valley Landfill 1 & 2	BTW Del Amo, Torrance, Main, Figueroa	Active
Goodyear Airship Facility	Chico & Dominguez Street	Active
GS Nursery	19200 South Main Street	Inactive – Action Required
Horowitz Property	20331 Main Street	Active
LA-405 Dominguez Golf Course	16539 South Main Street	Inactive – Action Required
Perry Street	21502–21526 Perry Street	No Further Action
Rebel Mini Storage	20501 South Main Street	Certified Operations & Maintenance – Land Use Restrictions
Sea Crest Parcel (AKA Perry Street Investigation Area)	Intersection of Alvar Street & Wingate Street, bordered to the east by Perry Street	Certified Operations & Maintenance – Land Use Restrictions
Cleanup School Sites		
Del Amo Elementary School	21228 Water Street	No Further Action
Corrective Action Sites		
BP West Coast Products LLC	1801 E. Sepulveda Boulevard	Refer RWQCB
Conoco Phillips LARC	1520 E. Sepulveda Boulevard.	Refer RWQCB
Huck International DBA Alcoa Fastening Systems	900 E Watson Center Road	No Further Action
Nalco Company	2111 E Dominguez Street	Refer RWQCB
Rainbow LLC	21119 Wilmington Avenue	Active
Shell Oil Products US – Carson Terminal	20945 S. Wilmington Avenue	Refer RWQCB
Solutia Inc.	2100 E 223rd Street	Inactive

Facility Name	Facility Address	Status
Stauffer Management Company LLC	2112 E 223rd Street	Inactive
Tesoro Refining & Marketing Company – Sulfur Recovery Plant	23208 S. Alameda Street	Inactive – Action Required
Turco Products Inc.	24600 S. Main Street	Active
Tiered Permit Sites		
American Racing Equip. Inc.	17006 S. Figueroa Street	No Further Action
GATX Tank Storage Term Corp.	2000 E. Sepulveda Boulevard	Refer Other Agency
Golden West Circuits, Inc.	1139 E. Dominguez Street	Refer Other Agency
Huck International Inc.	900 Watson Center Road	Refer Other Agency
Lonza Inc.	20851 Santa Fe Avenue	Refer Other Agency
Nalco Chemical Company	2111 E Dominguez Street	Active
Pioneer Video Mfg. Inc.	1041 E. 230th Street	Refer Other Agency
Rhonda	20720 S. Wilmington Avenue	Active
Solec International Inc./Sanyo Solar USA LLC	970 235th Street	Refer Other Agency
Evaluation/Investigation Sites		
Alpert & Alpert Iron & Metal	21930 S. Wilmington Ave.	Refer 1248 Local Agency
Alameda St. San LDFL	22700 S. Alameda St.	Inactive – Action Required
Carson City Hall Renovation	701 to 801 Carson St.	Inactive – Needs Evaluation
Clean Steel Inc.	2061 E. 220th St.	Refer 1248 Local Agency
LA Port O EMB Station Hospital		Inactive – Action Required
Martin Adams Dump	21111 Dolores St.	Inactive – Action Required
Niklor Chemical Company Inc.	2060 E 220th St.	Refer 1248 Local Agency
North Carson Area Site Discovery Project	405 Freeway and Main St.	No Action Required
Oil Transport Co.	241–259 E. Lomita Boulevard	Refer RWQCB
Old Quaker Paint Co.	21243 South Avalon Boulevard	Refer EPA
Rikuo Corporation	23828 Main Street	Refer 1248 Local Agency
Shell Oil Company Dominguez Facility	20945 South Wilmington Avenue	Refer EPA
Southwest Conservation	20300 South Main Street	Inactive – Needs Evaluation
Towne Avenue Elementary School	18924 Towne Avenue	No Further Action
Hazardous Waste Facilities Permitted – Operating		
Safety Kleen of CA Inc.	16604 San Pedro Street	Operation Permit
Hazardous Waste Facilities Post-Closure Permitted		
Phillips 66 Co Los Angeles Refinery Carson Plant	1520 East Sepulveda Boulevard	Post Closure Permit
Tesoro Carson Refinery	1801 East Sepulveda Boulevard	Post Closure Permit
Hazardous Waste Facilities Historical Non-Operating		
ECO Services Operations Corp.	20720 South Wilmington Avenue	Non-operating
Ethyl Corp/Wilmington Terminal	1201 East Lomita Boulevard	Closed
Golden Eagle Refining Company Inc.	21000 South Figueroa Street	Protective Filer

Facility Name	Facility Address	Status
Huck International Inc.	900 East Watson Center Road	Non-operating
Kinder Morgan Liquid Terminals LLC	2000 East Sepulveda Boulevard	Closed
Philip West Industrial Services	2222 East Sepulveda Boulevard	Closed
Shell Oil Products US – Carson Terminal	20945 South Wilmington Avenue	Closed
Solutia Inc.	2100 East 223rd Street	Closed
Stauffer Management Company LLC	2112 East 223rd Street	Undergoing Closure
Tesoro Refining & Marketing Company – Sulfur Recovery Plant	23208 South Alameda Street	Closed
Turco Products Inc.	24600 South Main Street	Closed
Permitted Facilities with Inspections/Enforcements		
Philip West Industrial Services	2222 East Sepulveda Boulevard	No Action
Philipps 66 Co Los Angeles Refinery Carson Plant	1520 E. Sepulveda Boulevard	No Action
Safety Kleen of California Inc. Carson	16604 San Pedro Street	No Action
Shell Oil Products US – Carson Terminal	20945 South Wilmington Avenue	No Action
Tesoro Carson Refinery	1801 East Sepulveda Boulevard	No Action

SOURCES: California Department of Toxic Substances Control, 2021a. EnviroStor, Cortese List Search, City of Carson. Available at: https://www.envirostor.dtsc.ca.gov/public/search?cmd=search&reporttype=CORTESE&site_type=CSITE%20,FUDS&status=ACT,BKLG,COM&reporttitle=%20=HAZARDOUS+WASTE+AND+SUBSTANCES+SITE+LIST%20+%28CORTESE%29. California Department of Toxic Substances Control, 2021b. EnviroStor Search, City of Carson. Available at: <https://www.envirostor.dtsc.ca.gov/public/map/?myaddress=carson%2C+ca>.

The State Water Resources Control Board (SWRCB) and the DTSC maintain the websites GeoTracker and EnviroStor, respectively, that provide information on the location, status, and investigation and cleanup reports for active and closed sites. The location of hazardous materials sites from the combined websites in and around the city of Carson as of October 4, 2021, are listed in **Table 3.8-1, DTSC EnviroStor Sites in the City of Carson**, and **Table 3.8-2, SWRCB GeoTracker Sites in the City of Carson**. These sites are also depicted in **Figure 3.8-1, Hazardous Materials and Sites**.² As regulatory agencies become aware of new cases, the cases are added to the websites.

The majority of the sites are open or closed petroleum sites (i.e., gasoline, diesel, and/or motor oil), where fuel and/or oil was released, and groundwater was or is at risk of being affected. These sites tend to be under the jurisdiction of the RWQCB. The sites under the jurisdiction of the DTSC (e.g., dry cleaning solvents from dry cleaners), may involve a variety of chemicals that may include petroleum releases.

² Permitted underground storage tanks are not depicted in Figure 3.8-1.

**TABLE 3.8-2
SWRCB GEOTRACKER SITES IN THE CITY OF CARSON**

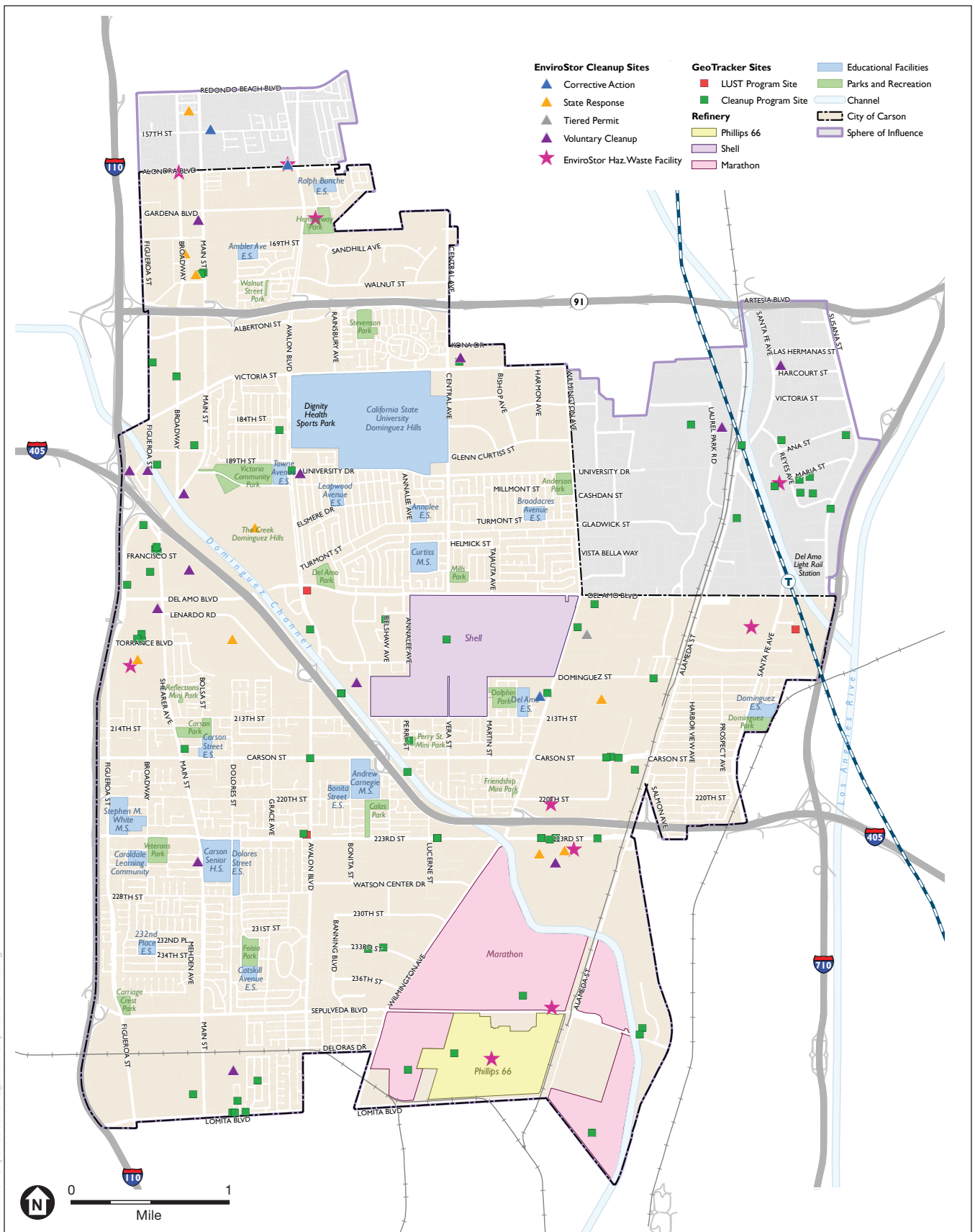
Facility Name	Facility Address	Status
Leaking Underground Storage Tanks – Open Cases		
Petrolane Propane	16800 South Main Street	Open – Eligible for Closure
ARCO #5093	21943 Wilmington Avenue	Open – Remediation
Mobile #11-MAF	21700 South Vermont Avenue	Open – Remediation
Mobil #18-MEJ	22240 South Avalon Boulevard	Open – Remediation
Texaco #61-106-0186	22232 Wilmington Avenue	Open – Remediation
Chevron #9-3874	111 Victoria Street	Open – Remediation
D & H Mobile Service Center	101 West Victoria Street	Open – Remediation
Tostco – 76 Station #6082	1025 East Carson Street	Open – Remediation
LA Co Facilities MGM Dept.	21356 South Avalon Boulevard	Open – Remediation
United Oil #61	320 East Sepulveda Boulevard	Open – Remediation
United Oil #65	300 West Carson Street	Open – Remediation
Carson Car Wash	225 East Carson Street	Open – Remediation
Cardlock Fuel Systems S.S. #18	2720 East Carson Street	Open – Remediation
Thrifty #073	23900 South Avalon Boulevard	Open – Remediation
Chevron SS# 9-4328 Former	21703 South Avalon Boulevard	Open – Remediation
Rockview Dairy	205 East Carson Street	Open – Remediation
Shell #204-1312-0708	21304 Avalon Boulevard	Open – Remediation
ARCO #6169	1411 East Del Amo Boulevard	Open – Remediation
7-Eleven Store #26294	22225 Avalon Boulevard	Open – Site Assessment
M & M Texaco Service	21212 South Alameda Street	Open – Site Assessment
City Tank Lines	18405 South Main Street	Open – Site Assessment
Cleanup Program Sites – Open		
Integral Partners Funding	S. Central Avenue and East Victoria Street	Open – Active
ARCO Refinery	1801 Sepulveda Boulevard	Open – Assessment & Interim Remedial Action
ARCO Carson Crude Terminal	24969 South Wilmington Avenue	Open – Assessment & Interim Remedial Action
Nissan North America Inc.	125 Griffith	Open – Assessment & Interim Remedial Action
Texaco Former	22351 Wilmington Avenue	Open – Eligible For Closure
City of Carson	21208 Shearer Avenue	Open – Inactive – Land Use Restriction
Commonwealth Aluminum Corp	2211 East Carson Avenue	Open – Inactive
City of Carson – Dreyfuss Property	19817 Main Street	Open – Inactive
Rhone-Poulenc, Inc.	20720 South Wilmington Avenue	Open – Inactive
Rainbow Transport Tank Cleaners	21119 South Wilmington Avenue	Open – Inactive
Blue Jay Land Enterprises, Inc.	241 East Lomita Boulevard	Open – Inactive
City of Carson Penske Truck	19646 South Figueroa Street	Open – Inactive
City of Carson Hurd & Snow Enterprises	329 Torrance Boulevard	Open – Inactive
City of Carson Rebel Mini Storage	20501 Main Street	Open – Inactive
Prologis Exchange	2211 Carson Street	Open – Inactive

Facility Name	Facility Address	Status
City of Carson Burgeno Property	19825 Main Street	Open – Inactive
City of Carson Syufy Enterprises	20151 Main Street	Open – Inactive
City of Carson Watson Land Co	1333 E 223rd Street	Open – Inactive
City of Carson ARCO	2284 East 223rd Street	Open – Inactive
Blue Jay Land Enterprises	319 East Lomita Boulevard	Open – Inactive
City of Carson Hicks Family Property	315 Torrance Boulevard	Open – Inactive
City of Carson Stadel Property	643 East 223rd Street	Open – Inactive
Cal Compact	2100 South Main Street	Open – Inactive
Oil transfer Site	241–259 East Lomita Boulevard	Open – Inactive
City of Carson USA Waste of CA	19803 Main Street	Open – Inactive
City of Carson Pepsi Bottling Group	19700 South Figueroa Street	Open – Inactive
Bonnies Courtesy Cleaners	111 East Carson Street	Open – Inactive
No 371 Carson		Open – Inactive
Gateway Business Properties	19130 South Figueroa Street	Open – Inactive
Monsanto Carson Plan	2100 East 223rd Street	Open – Inactive
City of Carson Swan Property	2254 East 223rd Street	Open – Inactive
City of Carson TDJ Pioneer	20300 Figueroa Street	Open – Inactive
City of Carson Lucas Property	2059 East 223rd Street	Open – Inactive
City of Carson Hicks Family Property	321 Torrance Boulevard	Open – Inactive
City of Carson LA County Property	2049 East 223rd Street	Open – Inactive
City of Carson Fuentes Property	1355 East 223rd Street	Open – Inactive
City of Carson Koll Property	1463 East 223rd Street	Open – Inactive
City of Carson L & M Franklin Inv.	2035 East 223rd Street	Open – Inactive
City of Carson Atkemix Thirty Seven Inc.	2112 East 223rd Street	Open – Inactive
Former Shell Oil Company KAST Property Tank Farm	24401 Marbella Avenue	Open – Remediation
KMEP Carson Terminal (GATX)	2000 East Sepulveda Boulevard	Open – Remediation
Fletcher Oil Refining Co.	24721 South Main Street	Open – Remediation
Carson II Industrial Property	20545 Belshaw Boulevard	Open – Remediation
Unocal – Tosco Los Angeles Refinery	1520 East Sepulveda Boulevard	Open – Remediation
Shell Carson Terminal	20945 Wilmington Avenue	Open – Remediation
GATX GX-19- Pipeline Release Area	900 Block East 223rd Street	Open – Remediation
Anco Metal Improvement Co	417 West 164th Street	Open – Remediation
Shell Pipeline	21500 Perry Street	Open – Site Assessment
Valence Surface Technologies	417 164th Street	Open – Site Assessment
Horowitz Property	16539 South Main Street	Open – Site Assessment
Stauffer Management Co	2112 East 223rd Street	Open – Site Assessment
Tesoro Pipeline Line 7 Spill	2000 East Sepulveda Boulevard	Open – Site Assessment
Dominguez Channel @ Carson Street (Relic)	Carson Street	Open – Site Assessment
Watson Industrial Center	1070 East 223rd Street	Open – Site Assessment
UPRC Dolores Yard	2442 East Carson Street	Open – Site Assessment
Chemical Tank Farm	2365 East Sepulveda Boulevard	Open – Site Assessment
Blue Jay Land Enterprises Inc.	259 East Lomita Boulevard	Open – Site Assessment

Facility Name	Facility Address	Status
Carson Plaza	603 East University Drive	Open – Site Assessment
Yellow Freight System, Inc.	2350 Dominguez Street	Open – Site Assessment
Landfill Sites – Closed and Inactive		
Adams Industries Landfill	21111 Dolores Street	Completed – Case Closed
Alameda Street Dump	22700 (22746?) South Alameda Street	Completed – Case Closed
BKK Carson Landfill	19200 Main Street	Completed – Case Closed
Broadway & Main Corporation	19135 South Broadway	Completed – Case Closed
Brown, Morris H	SW Corner of 190th St & Figueroa St	Completed – Case Closed
CA By-Products Disposal Site	2241 East Carson Street	Completed – Case Closed
CAL Compact Landfill	20400 Main Street	Completed – Case Closed
CAL- Compact 2 Sanitary Landfill	20300 South Main Street	Completed – Case Closed
CA By-Products Disposal Site	2241 East Carson Street	Completed – Case Closed
CALTRANS – Oil Operators Sump	West of Los Angeles River, NE OF 405 & 110 Fwy	Completed – Case Closed
Carson NO. 1 - Shell Chemical Company	19204 South Figueroa St (19401 South Main Street)	Completed – Case Closed
D & D Property Maintenance	23000 South Alameda Street	Completed – Case Closed
Dominguez Energy, L.P.	1556 Victoria	Completed – Case Closed
Gardena Valley No. 1 & 2	101 West Torrance Boulevard	Completed – Case Closed
Gardena Valley No. 5 Landfill	100 West Torrance Boulevard (21000 South Figueroa St)	Completed – Case Closed
Gardena Valley No. 5 Landfill	21000 Figueroa St	Completed – Case Closed
Gardena Valley No. 6	213th Street (21001 Chico Street)	Completed – Case Closed
Hardwick Disposal Pit No. 44	22620 South Alameda Street	Completed – Case Closed
Hardwick Disposal Pits - Watson Land Co.	22400 South Alameda Street	Completed – Case Closed
Johns-Manville Carson	2420 East 23rd Street	Completed – Case Closed
Moneta Avenue Dump	18900 South Moneta Avenue	Completed – Case Closed
Mor-Glow Paint Company	18937 South Main Street	Completed – Case Closed
Niklor Chemical Co.	2060 East 220th Street	Completed – Case Closed
Southwest Conservation Inc.	20201 South Main Street	Completed – Case Closed
Southwest Steel Rolling Mills No. 1 and No. 2	Carson	Completed – Case Closed
Werdin	20400 South Main Street	Completed – Case Closed
Permitted Underground Storage Tank Sites		
Air Tec	1606 East Carson Street	N/A
Anheuser Busch Beach Cities	20499 South Reeves Avenue	N/A
ARCO 42089	1411 East Del Amo Boulevard	N/A
ARCO 42118	18523 Avalon Boulevard	N/A
ARCO AM/PM	21313 Avalon Boulevard	N/A
ARCO AM/PM	241 East Albertoni Street	N/A
Arctic Glacier USA Inc.	17011 South Central Avenue	N/A
Avalon Oil Corporation	655 East Carson Street	N/A
Carson 76	22802 South Figueroa Street	N/A
Carson Chevron	22222 South Wilmington Avenue	N/A
Carson City Hall	701 East Carson Street	N/A

Facility Name	Facility Address	Status
Carson Lubricants Plant	1520 East Sepulveda Boulevard	N/A
Carson Mobile	20223 South Avalon Boulevard	N/A
Carson Union 76	1025 East Carson Street	N/A
Carson Valero Inc.	23825 South Avalon Boulevard	N/A
Central Chevron	17453 South Central Avenue	N/A
CFS 18 Carson	2720 East Carson Boulevard	N/A
Circle K Stores Inc. Site #2709493	22240 South Avalon Boulevard	N/A
City of Carson Maintenance Yard	2410 East Dominguez Street	N/A
Del Amo Park Inc.	20320 South Avalon Boulevard	N/A
Dewey Pest Control	21111 South Figueroa Street	N/A
E-Cig Company	129 Selandia Lane	N/A
Kaiser Medical Center CDRP	23621 South Main Street	N/A
LA Co Sheriff's Dept. Carson Sheriff Station	21356 South Avalon Boulevard	N/A
LA Metro Hauling	1970 East 213th Street	N/A
LACSD Joint Water Pollution Control Plant	24501 South Figueroa Street	N/A
Long Beach Shavings Company	20915 South Lambertson Avenue	N/A
Max Express Inc.	22440 South Alameda Street	N/A
Old Dominion Freight Line Inc.	21300 South Wilmington Street	N/A
Penske Truck Leasing Co. LP	19646 South Figueroa Street	N/A
Pepsi Cola Bottling group	19700 South Figueroa Street	N/A
Puritan Bakery Inc.	1624 East Carson Street	N/A
R & L Facility LGB	1101 East Janis Street	N/A
Silmor Investment Co. LLC	19120 South Vermont Avenue	N/A
Tesoro (ARCO) 62544	204 East Sepulveda Boulevard	N/A
Tesoro (Shell) 68517	22232 South Wilmington Avenue	N/A
Tesora (USA) 63073	23900 Avalon Boulevard	N/A
Tesoro Los Angeles Refinery Carson Operations	22700 South Wilmington Avenue	N/A
Tesoro Refining and Marketing Co LLC	1801 East Sepulveda Boulevard	N/A
Tesoro Watson	1145 East 223rd Street	N/A
Thrifty Oil Co	22309 South Main Street	N/A
United #165	300 West Carson Street	N/A
United #179	22235 South Figueroa Street	N/A
Verizon Business	17900 South Central Avenue	N/A
Wilmington Park	21633 South Wilmington Avenue	N/A
XPO Logistics Freight Inc.	20805 Fordyce Avenue	N/A

SOURCE: California State Water Resources Control Board, 2021. GeoTracker Search, City of Carson. Available at: https://geotracker.waterboards.ca.gov/search?CMD=search&case_number=&business_name=&main_street_name=&city=Carson&zip=&county=&SITE_TYPE=LUFT&SITE_TYPE=SLIC&SITE_TYPE=LANDFILL&SITE_TYPE=DOD%2C+DODPRIV%2C+DODUST&SITE_T YPE=UST&oilfield=&STATUS=&BRANCH=&MASTER_BASE=&Search=Search.



SOURCE: EnviroStor, 2022; GeoTracker, 2021; City of Carson, 2017; Los Angeles GIS Data Portal, 2017; Dyett & Bhatia, 2021

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Figure 3.8-1
Hazardous Materials and Sites



Oil Fields and Pipelines

The city overlies parts of two oil fields: the Dominguez and Wilmington oil fields. According to the 2021 Report of California Oil and Gas Production Statistics,³ for the year of 2019, the Dominguez Oil Field produced 5,818 barrels of oil and the onshore oil production portion of the Wilmington Oil Field produced 4,736,467 barrels of oil. Petroleum contains several components that are considered hazardous, such as benzene, a known carcinogen. Oil field activities often include the use of hazardous materials like fuels and solvents. In the past, day-to-day practices in oil fields were not environmentally sensitive and resulted in oil-stained soils and other contaminants in and around oil fields. Remediation of these areas is generally required when the oil field is no longer economically productive. Comprehensive site investigations are required to accurately identify and characterize any soil and groundwater contamination. As discussed above, many of these sites located within the city of Carson are undergoing or have undergone remediation to clean up contamination. However, undocumented oil contaminated soils could always be uncovered which are considered hazardous. Additionally, as discussed below, methane gas is associated with oil production, and any future development in and around oil wells should require additional investigations. Blowout prevention devices are generally used by well operators whenever oil wells are being drilled or reworked. However, improper installation or faulty devices could potentially result in a blowout at a drilling facility.

There are several crude oil and petroleum product pipelines that transect the city, associated with the three refineries located in the city. The Southern Pacific Pipeline transports a significant amount of various products through the city from several different locations.⁴ These pose a hazard risk due to leaking or possibility of fires or explosions, which could result in soil and/or groundwater contamination, injury and/or destruction of property. If a pipeline is found to be damaged or broken, the LACFD, as the first responder, would contact the operator of the damaged pipeline and take steps to mediate spill and/or fire suppression if required. The LACFD has the emergency numbers for the pipeline operators and will contact them immediately if a situation arises. Additionally, the LACFD has the responsibility to contact the State Office of Emergency Services for any pipeline rupture, fire, or explosion.

Hazardous Building Materials

Polychlorinated Biphenyls

Polychlorinated Biphenyls (PCBs) are regulated by the USEPA under the Toxic Substances Control Act (TSCA),⁵ which banned the manufacture of new electrical equipment containing PCBs although the continued use of existing PCB-containing equipment is allowed. TSCA also contains provisions controlling the continued use and disposal of existing PCB-containing equipment. The disposal of PCB wastes is also regulated by TSCA, which contains life cycle provisions similar to those in RCRA. In addition to TSCA, provisions relating to PCBs are contained in the Hazardous

³ California Department of Conservation Division of Oil, Gas, & Geothermal Resources, 2021. 2019 Report of California Oil and Gas Production Statistics. Available. https://www.conservation.ca.gov/calgem/pubs_stats/annual_reports/Pages/annual_reports.aspx, Accessed August 2021.

⁴ City of Carson, 2000. Carson General Plan Safety Element. Online. http://ci.carson.ca.us/content/files/pdfs/planning/generalplan/Chapter%206_Safety.pdf, Accessed December 2017.

⁵ 15 U.S.C secs. 2601 et seq.

Waste Control Law (HWCL),⁶ which lists PCBs as hazardous waste above a certain threshold. PCB hazardous waste must be treated, transported, and disposed accordingly.

Asbestos-Containing Materials

State level agencies, in coordination with the USEPA and U.S. Department of Labor Occupational Safety and Health Administration (Fed/OSHA), regulate the removal, abatement, and transport procedures for asbestos-containing materials (ACM). Releases of asbestos from industrial, demolition, or construction activities are prohibited by these regulations and medical evaluation and monitoring is required for employees performing activities that could expose them to asbestos. Additionally, the regulations include warnings that must be heeded and practices that must be followed to reduce the risk for asbestos emissions and exposure. Finally, federal, state, and local agencies must be notified prior to the onset of demolition or construction activities with the potential to release asbestos. Additionally, removal of ACMs must be conducted in accordance with the requirements of SCAQMD Rule 1403. Rule 1403 regulations require that the following actions be taken: (1) a survey of the facility prior to issuance of a permit by SCAQMD; (2) notification of SCAQMD prior to construction activity; (3) asbestos removal in accordance with prescribed procedures; (4) placement of collected asbestos in leak-tight containers or wrapping; and (5) proper disposal

Lead-Based Paint

The Lead in Construction Standard,⁷ prepared by the California Occupational Safety and Health Administration (Cal/OSHA), establishes permissible exposure limits (PELs); exposure assessment; compliance methods; respiratory protection; protective clothing and equipment; housekeeping; medical surveillance; medical removal protection; employee information, training, and certification; signage; record keeping; monitoring; and agency notification.

Schools

Some populations, such as children, are more susceptible to health effects of hazardous materials than the general population. Hazardous materials used near schools and day care centers must consider potential health effects to these populations, often referred to as “sensitive receptors.” Construction or redevelopment on contaminated properties that could potentially generate vapors or fugitive dust containing contaminants may potentially pose a health risk to these populations. In addition, commercial businesses in proximity to sensitive receptors may have hazardous emissions or handle hazardous or acutely hazardous materials or wastes that could pose a health risk to these sensitive receptors.

To protect sensitive receptors, Section 17210 et seq. of the State Education Code, Sections 21151.2 and 21151.4, and 21151.8 of the Public Resources Code require that prospective school sites be reviewed to determine that such sites are not a current or former hazardous waste disposal site, a hazardous substance release site, or the site of hazardous substance pipelines. These laws also require consultation with local hazardous materials agencies and air quality districts to

⁶ 22 C.F.R. Division 4.5

⁷ 8 C.C.R., Section 1532.1

ensure that sites within one-quarter mile of a school that handle or emit hazardous substances would not potentially endanger future students or workers at the prospective school site.

Pursuant to the State Education Code, all school districts receiving State funds are required to prepare a Phase I environmental assessment on prospective school sites. The Phase I assessment would detail the historical uses of the property and indicate any potential for contamination. DTSC must review this assessment and make one of the following findings: (1) that no further action is required; or (2) that concerns about contamination exist and the district must conduct a Preliminary Endangerment Assessment (PEA). The PEA process entails site sampling and the development of a detailed risk assessment of any contaminants present on the proposed school property.

The following schools are located within city limits:

- Carson Street Elementary School – 161 E. Carson Street
- Magnolia Science Academy-3 – 1254 E. Helmick Street
- Carson High School – 22328 S. Main Street.
- Dominguez Elementary School – 21250 S. Santa Fe Avenue
- Del Amo Elementary School – 21228 Water Street
- Broadacres Avenue School – 19424 Broadacres Avenue
- Annalee Elementary School – 19410 Annalee Avenue
- Leapwood Avenue Elementary School – 19302 Leapwood Avenue
- Caroldale Ave. Elementary School – 22424 Caroldale Avenue
- Bonita Street Elementary School – 21929 Bonita Street
- Dolores Street Elementary School – 22526 Dolores Street
- Carnegie Middle School – 21820 Bonita Street
- Towne Avenue Elementary School – 18924 Towne Avenue
- St. Philomena School – 21832 S. Main Street
- Ambler Avenue Elementary School – 319 E. Sherman Drive
- Stephen M. White Middle School – 22102 S. Figueroa Street.
- Carson Christian School – 17705 S. Central Avenue
- Catskill Avenue Elementary – 23536 Catskill Avenue
- California State University, Dominguez Hills – 1000 E. Victoria Street

Airport Hazards

There are no public airports located within the city of Carson. The following airports are nearest to the city:

- Compton/Woodley Airport, located approximately 0.5 mile northeast of the city's sphere of influence

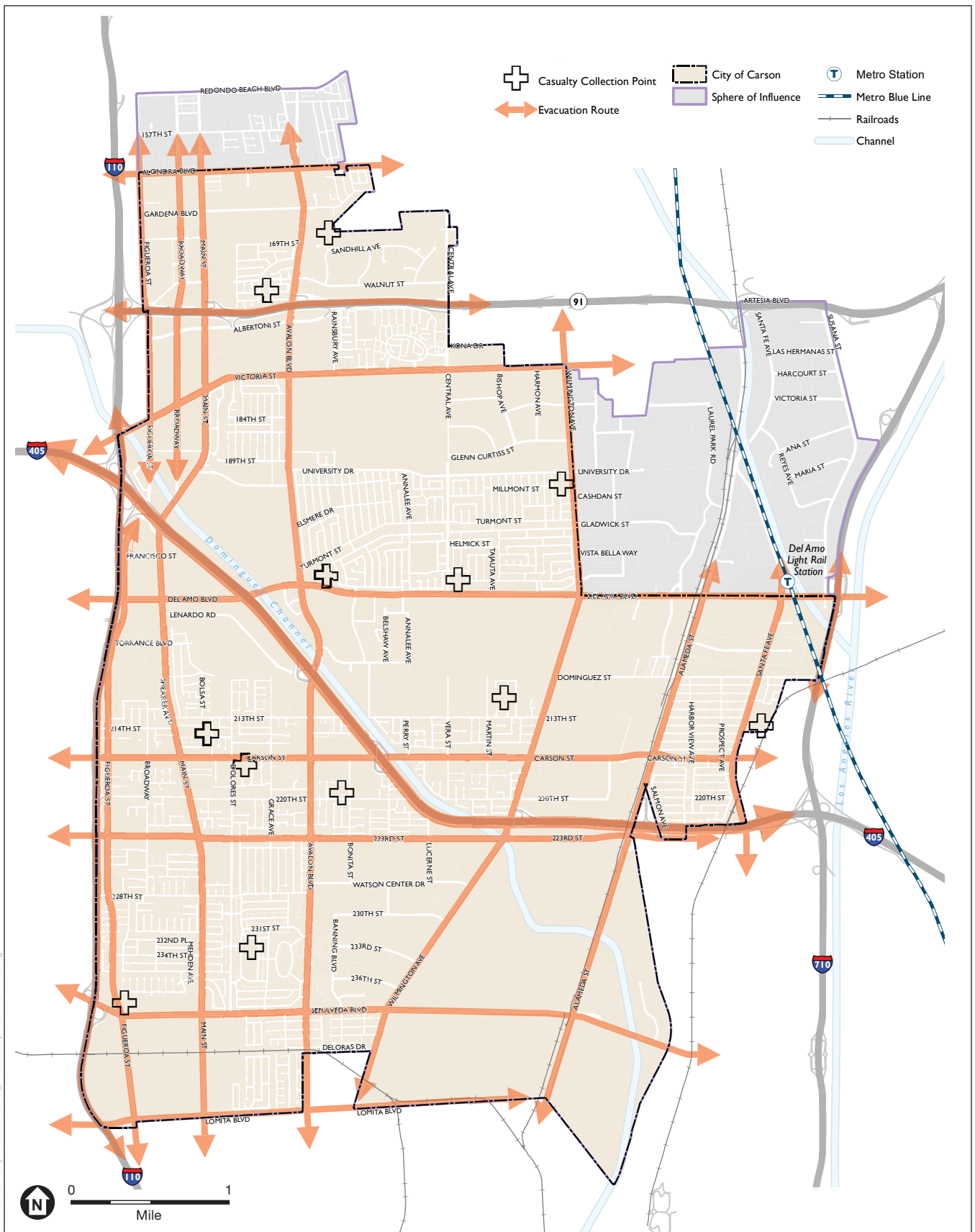
- Torrance Airport, approximately 2.25 miles west of the city
- Los Angeles International Airport (LAX), located approximately 12.7 miles northwest of the city
- Long Beach Airport, located approximately 13 miles southeast of the city

Additionally, the Goodyear Blimp Base Airport and the Carson Sheriff Station Heliport are private air strips located within the city of Carson that are registered with the Federal Aviation Administration in Los Angeles County.

Emergency Response

Emergency response plans include elements to maintain continuity of government, emergency functions of governmental agencies, mobilization and application of resources, mutual aid, and public information. Emergency response plans are maintained at the federal, state and local level for all types of disasters, including human-made and natural. It is the responsibility of government to undertake an ongoing comprehensive approach to emergency management in order to avoid or minimize the effects of hazardous events. Local governments have the primary responsibility for preparedness and response activities. The Los Angeles County Office of Emergency Management (OEM) maintains the Los Angeles County Operational Area Emergency Response Plan and the County of Los Angeles All-Hazard Mitigation Plan. OEM leads and coordinates disaster plans and disaster preparedness exercises for all cities and 288 special districts in Los Angeles County. The city of Carson is located within Area E, Los Angeles County (southeast section), Region 1, Southern Administrative Region of the State Office of Emergency Services. City staff has been designated to coordinate all State Emergency Management System (SEMS) functions. The City has its own Public Safety, Engineering Services, Community Development, Facilities and Maintenance, Finance, Human Resources, and Recreation and Community Services Departments, but does not have its own police or fire department. It relies on the County of Los Angeles for these services. During the response phase, the Carson Sheriff's Station Emergency Operations Center (EOC) or Watch Commander serves as the coordination and communication point, and the access to the Los Angeles County Operational Area.

Evacuation of the city, if necessary because of an emergency, would be conducted by the Los Angeles County Sheriff's Department in accordance with the City's Evacuation Plan. The designated evacuation routes throughout the city are depicted in **Figure 3.8-2, Evacuation Routes**. The primary EOC is City Hall. Should City Hall be damaged, an alternate EOC would be activated. The City has also created a list of numerous locations within the city of Carson that would be used in case of a disaster or major emergency, referred to as Casualty Collection Points (depicted in Figure 3.8-2).



D:\770087.00 - City of Carson GPU_EIR\05 Graphics-GIS-Modeling

SOURCE: City of Carson, 2017; Los Angeles GIS Data Portal, 2017; Dyett & Bhatia, 2021

Carson General Plan Update

Figure 3.8-2
Evacuation Routes



Wildland Fire Hazards

Fire Hazard Severity Areas in Los Angeles County are designated by the California Department of Forestry and Fire Prevention (CAL FIRE) and the LACFD within the city of Carson. Fire hazard severity zones range from Moderate to Very High. There are three types of fire hazard severity zones based on who is financially responsible for preventing and suppressing wildfires.

- **Federal Responsibility Areas (FRAs):** The federal government is financially responsible for wildfire suppression.
- **State Responsibility Areas (SRAs):** The state is financially responsible for wildfire suppression.
- **Local Responsibility Areas (LRAs):** Cities or the County are financially responsible for wildfire suppression. The city of Carson falls under the LRA.

The city of Carson falls under the LRA and is mapped within a non-VHFHSZ; there are no VHFHSZ mapped in the vicinity of the city.^{8,9}

3.8.3 Regulatory Framework

This section provides the relevant federal, State, regional, and local regulations applicable to the Project.

Federal

The primary federal agencies with responsibility for hazardous materials management include the USEPA, Fed/OSHA, and the U.S. Department of Transportation (USDOT). Federal laws, regulations, and responsible agencies are summarized in **Table 3.8-3, *Federal Laws and Regulations Related to Hazardous Materials Management***.

State and local agencies often have either parallel or more stringent rules than federal agencies. In most cases, state law mirrors or overlaps federal law and enforcement of these laws is the responsibility of the state or of a local agency to which enforcement powers are delegated. For these reasons, the requirements of the law and its enforcement are discussed under either the State or local agency section.

⁸ California Department of Forestry and Fire Protection (CAL FIRE), 2007. Fire Hazard Severity Zones in SRA for Los Angeles County. Fire and Resource Assessment Program. Map. Scale 1:150,000.

⁹ CAL FIRE, 2011. Very High Fire Hazard Severity Zones in LRA for Los Angeles County. Fire and Resource Assessment Program. Map. Scale 1:150,000.

**TABLE 3.8-3
 FEDERAL LAWS AND REGULATIONS RELATED TO HAZARDOUS MATERIALS MANAGEMENT**

Classification	Law or Responsible Federal Agency	Description
Hazardous Materials Management	Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) and the Superfund Amendments and Reauthorization Act of 1986.	Congress enacted CERCLA, commonly known as Superfund, on December 11, 1980. CERCLA 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. The Superfund Amendments and Reauthorization Act (SARA), amended the CERCLA on October 17, 1986, and stressed the importance of permanent remedies and innovative treatment technologies in cleaning up hazardous waste sites. SARA also required Superfund actions to consider the standards and requirements found in other state and federal environmental laws and regulations; provided new enforcement authorities and settlement tools; increased state involvement in every phase of the Superfund program; increased the focus on human health problems posed by hazardous waste sites; encouraged greater citizen participation in making decisions on how sites should be cleaned up; and increased the size of the trust fund to \$8.5 billion.
	Emergency Planning and Community Right-to-Know Act of 1986 (also known as Title III of SARA)	The Emergency Planning and Community Right-to-Know Act (EPCRA), ¹⁰ also known as SARA Title III, was enacted in October 1986. This law requires any infrastructure at the state and local levels to plan for chemical emergencies. Reported information is then made publicly available so that interested parties may become informed about potentially dangerous chemicals in their community. EPCRA Sections 301 through 312 are administered by USEPA's OEM. EPA's Office of Information Analysis and Access implements the EPCRA Section 313 program. In California, SARA Title III is implemented through CalARP. The Act imposes requirements to ensure that hazardous materials are properly handled, used, stored, and disposed of and to prevent or mitigate injury to human health or the environment in the event that such materials are accidentally released.
Hazardous Waste Handling	USEPA	In general, the USEPA works to develop and enforce regulations that implement environmental laws enacted by Congress. The agency is responsible for researching and setting national standards for a variety of environmental programs and delegates to States and Native American tribes the responsibility for issuing permits and for monitoring and enforcing compliance. USEPA programs promote handling hazardous wastes safely, cleaning up contaminated land, and reducing waste volumes through such strategies as recycling. The State of California falls under the jurisdiction of USEPA Region 9. Under the authority of the Resource Conservation and Recovery Act (RCRA) and in cooperation with State and Tribal partners, the USEPA Region 9 Waste Management and Superfund Divisions manage programs for site environmental assessment and cleanup, hazardous and solid waste management, and underground storage tanks.
	RCRA, as amended by the Hazardous and Solid Waste Act of 1984	Under RCRA, the USEPA regulates the generation, transportation, treatment, storage, and disposal of hazardous waste from "cradle to grave." Amended RCRA in 1984, affirming and extending the "cradle to grave" system of regulating hazardous wastes. The amendments specifically prohibit the use of certain techniques for the disposal of some hazardous wastes. Any business, institution, or other entity that generates hazardous waste is required to identify and track its hazardous waste from the point of generation until it is recycled, reused, or disposed. The DTSC is responsible for implementing the RCRA program as well as California's own hazardous waste laws, which are collectively known as the HWCL. Under the CUPA program, the California Environmental Protection Agency (Cal/EPA) has in turn delegated enforcement authority to the County of Los Angeles (County) for state law regulating hazardous waste producers or generators.

¹⁰ Sections 311–312, 42 U.S.C. sects 11021–11022

Classification	Law or Responsible Federal Agency	Description
Hazardous Materials Transportation	USDOT	USDOT has the regulatory responsibility for the safe transportation of hazardous materials. The USDOT regulations govern all means of transportation except packages shipped by mail (49 CFR).
	U.S. Postal Service (USPS)	USPS regulations govern the transportation of hazardous materials shipped by mail.
Occupational Safety	Occupational Safety and Health Act of 1970	Fed/OSHA sets standards for safe workplaces and work practices, including the reporting of accidents and occupational injuries (29 CFR 1910).
Structural and Building Components (lead-based paint, polychlorinated biphenyls, and asbestos)	TSCA	Regulates the use and management of polychlorinated biphenyls in electrical equipment, and sets forth detailed safeguards to be followed during the disposal of such items.
	USEPA	The USEPA monitors and regulates hazardous materials used in structural and building components and their effects on human health.

State

The primary State agencies with responsibility for hazardous materials management in the region include the DTSC and the RWQCB within the Cal/EPA, Cal/OSHA, California Department of Health Services (CDHS), California Highway Patrol (CHP), and the California Department of Transportation (Caltrans). State laws, regulations, and responsible agencies are summarized in **Table 3.8-4, State Laws and Regulations Related to Hazardous Materials Management.**

**TABLE 3.8-4
STATE LAWS AND REGULATIONS RELATED TO HAZARDOUS MATERIALS MANAGEMENT**

Classification	Law or Responsible State Agency	Description
Hazardous Materials Management	Unified Hazardous Waste and Hazardous Materials Management Regulatory Program (Unified Program); CUPA (Health and Safety Code Sections 25404 et seq.)	In January 1996, Cal/EPA adopted regulations, which implemented a Unified Program at the local level. The agency responsible for implementation of the Unified Program is called the CUPA, which for the city of Carson, is the LACFD HHMD. The CUPA administers the following programs: <ul style="list-style-type: none"> • Hazardous Waste Generator and On-site Hazardous Waste Treatment Programs (a.k.a. Tiered Permitting) • Aboveground Petroleum Storage Tanks • Hazardous Materials Release Response Plans and Inventory Program (a.k.a. Hazardous Materials Disclosure or "Community-Right-To-Know") • California Accidental Release Prevention Program • UST Program • Uniform Fire Code Plans and Inventory Requirements
	State Hazardous Waste and Substances List ("Cortese List"); DTSC, RWQCB, SC EHD.	The Project site includes one hazardous materials site on the "Cortese List" compiled pursuant to Government Code Section 65962.5 and referenced in Public Resources Code 21092.6. The oversight of hazardous materials sites often involves several different agencies that may have overlapping authority and jurisdiction. For the onsite hazardous materials cases and issues, the RWQCB is the lead agency. Other cases may be overseen by the DTSC, the RWQCB, the LACFD HHMD, or other agencies.

Classification	Law or Responsible State Agency	Description
Hazardous Waste Handling	California Hazardous Materials Release Response Plan and Inventory Law of 1985; CUPA	The California Hazardous Materials Release Response Plan and Inventory Law of 1985 (Business Plan Act) requires that businesses that store hazardous materials onsite prepare a HMBP and submit it to the local CUPA, which in this case is the LACFD HHMD.
	California Hazardous Waste Control Act; DTSC	Under the California Hazardous Waste Control Act, California Health and Safety Code, Division 20, Chapter 6.5, Article 2, Section 25100, et seq., DTSC regulates the generation, transportation, treatment, storage, and disposal of hazardous waste in California. The 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. DTSC is also the administering agency for the California Hazardous Substance Account Act. California Health and Safety Code, Division 20, Chapter 6.8, Sections 25300 et seq., also known as the State Superfund law, providing for the investigation and remediation of hazardous substances pursuant to State law.
	California Fire Code	The California Fire Code regulates the storage and handling of hazardous materials, including the requirement for secondary containment, separation of incompatible materials, and preparation of spill response procedures.
Hazardous Materials Transportation	Titles 13, 22, and 26 of the California Code of Regulations	Regulates the transportation of hazardous waste originating in and passing through the state, including requirements for shipping, containers, and labeling.
	CHP and Caltrans	These two state agencies are primary responsibility for enforcing federal and State regulations and responding to hazardous materials transportation emergencies.
Occupational Safety	Cal/OSHA	Cal/OSHA has primary responsibility for developing and enforcing workplace safety regulations in California. Because California has a federally approved OSHA program, it is required to adopt regulations that are at least as stringent as those found in Title 29 of the Code of Federal Regulations (CFR). Cal/OSHA standards are generally more stringent than federal regulations.
	Cal/OSHA regulations (8 CCR)	Concerning the use of hazardous materials in the workplace require employee safety training, safety equipment, accident and illness prevention programs, hazardous substance exposure warnings, and emergency action and fire prevention plan preparation.
	California Office of Statewide Health Planning and Development	The Office of Statewide Health Planning and Development serves as the regulatory building agency for all hospitals and nursing homes in California. Its primary goal in this regard is to ensure that patients in these facilities are safe in the event of an earthquake or other disaster, and to ensure that the facilities remain functional after such an event in order to meet the needs of the community affected by the disaster.

Classification	Law or Responsible State Agency	Description
Construction Storm Water General Permit (Construction General Permit; Order 2009-0009-DWQ, NPDES No. CAS000002; as amended by Orders 2010-0014-DWQ and 2012-006-DWQ)	RWQCB	Dischargers whose project disturbs one or more acres of soil or where projects disturb less than one acre but are part of a larger common plan of development that in total disturbs one or more acres, are required to obtain coverage under the <i>NPDES General Permit for Stormwater Discharges Associated with Construction and Land Disturbance Activities</i> (Construction General Permit; Order 2009-0009-DWQ, NPDES No. CAS000002; as amended by Orders 2010-0014-DWQ and 2012-006-DWQ). Construction activity subject to this permit includes clearing, grading, grubbing, and other disturbances to the ground such as excavation and stockpiling, but does not include regular maintenance activities performed to restore the original line, grade, or capacity of a facility. The Construction General Permit requires the development and implementation of a Stormwater Pollution Prevention Plan (SWPPP) that includes specific Best Management Practices (BMPs) designed to prevent sediment and pollutants from contacting stormwater from moving offsite into receiving waters. The BMPs fall into several categories, including erosion control, sediment control, waste management and good housekeeping, and are intended to protect surface water quality by preventing the off-site migration of eroded soil and construction-related pollutants from the construction area.
Municipal Separate Storm Sewer System (MS4) Permit NPDES No. CAS000004 and Order No. R5-2013-0001	RWQCB	The MS4 permit requires permittees (in this case, the City of Carson) to reduce pollutants and runoff flows from new development and redevelopment using BMPs to the maximum extent practical. The MS4 permittee also has its own development standards, also known as Low Impact Development (LID)/post-construction standards that include a hydromodification element. The MS4 permit requires specific design concepts for LID/post-construction BMPs in the early stages of a project during the entitlement and CEQA process and the development plan review process.
Industrial Storm Water General Permit Order No. 2014-0057-DWQ	RWQCB	Storm water discharges associated with industrial sites must comply with the regulations contained in the Industrial Storm Water General Permit Order No. 2014-0057-DWQ (IGP). The IGP regulates discharges associated with certain defined categories of industrial activities including manufacturing facilities; hazardous waste treatment, storage, or disposal facilities; landfills, land application sites, and open dumps; cement manufacturing; fertilizer manufacturing; petroleum refining; phosphate manufacturing; recycling facilities; steam electric power generating facilities; transportation facilities; and sewage or wastewater treatment works. The IGP requires the implementation of best management practices, a site-specific SWPPP, and monitoring plan. The IGP also includes criteria for demonstrating no exposure of industrial activities or materials to storm water, and no discharges to waters of the United States.
Underground Infrastructure	California Government Code Section 4216-4216.9	Section 4216-4216.9 "Protection of Underground Infrastructure" requires an excavator to contact a regional notification center (e.g., Underground Services Alert or Dig Alert) at least two days prior to excavation of any subsurface installations. Any utility provider seeking to begin a project that could damage underground infrastructure can call Underground Service Alert, the regional notification center for southern California. Underground Service Alert will notify the utilities that may have buried lines within 1,000 feet of the project. Representatives of the utilities are then notified and are required to mark the specific location of their facilities within the work area prior to the start of project activities in the area.

Summary of Hazardous Building Materials Regulations

From the above-listed regulations, federal and state citations to specific hazardous materials relevant to the demolition and renovation of structures are listed below:

- **Asbestos Containing Materials (ACM):** CCR Title 8, Division 1, Chapter 4, Article 4, Sections 1529 and 5208
- **Lead Based Paint (LBP):** CCR Title 8, Division 1, Chapter 4, Article 4, Section 1532.1
- **Polychlorinated Biphenyl (PCB):** RCRA: 4 CFR 7610; TSCA: 15 USC 2695; California: CCR Title 22, Division 4.5, Chapter 11, Article 3, Section 66261.24
- **Mercury and/or PCBs in light tubes and switches:** CCR Title 22, Division 4.5, Chapter 12, Article 1, Sections 66262.11; 66273 et sec; and CCR Title 22, Division 4.5, Chapter 42, Sections 67426.1 through 67428.1
- **Freon (chlorofluorocarbon and hydrochlorofluorocarbon refrigerants):** California Health and Safety Code, Division 20, Chapter 6.5, Section 25143.2 and 25143.9

Details for specific hazardous building materials are provided below.

California Construction Safety Orders for Asbestos-Containing Materials

CCR Title 8, Section 1529 and 5208 establishes the requirements for any construction worker who may be exposed to ACM during demolition or salvage, removal or encapsulation, new construction, and cleanup activities. The construction safety orders define ACM as any material with more than one percent of ACM. In addition, the construction safety orders establish an action level of 0.1 fiber per cubic meter of air calculated over an 8-hour time-weighted average without regard for the use of a respirator, meaning this is the limit where safety protocols must be initiated, such as use of a respirator. Under no circumstances may a worker be exposed to 1.0 fiber per cubic centimeter of air as averaged over a sampling period of 30 minutes. These regulations require implementation of engineering and work practice controls such as respiratory protection, protective clothing, housekeeping, hygiene practices, and signage requirements to meet worker exposure limits. Survey and cleanup must be conducted by state-certified consultants and contractors. Medical monitoring and training requirements are also identified. The SCAQMD is the regulatory agency that oversees and enforces compliance in Los Angeles County and the city of Carson.

California Construction Safety Orders for Lead

CCR Title 8, Section 1532.1, Lead, establishes the requirements for any construction worker who may be exposed to lead during demolition or salvage, removal or encapsulation, new construction, and cleanup activities. The construction safety orders establish an action level of 30 micrograms of lead per cubic meter ($\mu\text{g}/\text{m}^3$) of air calculated over an 8-hour time-weighted average without regard for the use of a respirator, meaning this is the limit where safety protocols must be initiated, such as use of a respirator. Under no circumstances may a worker be exposed to 50 $\mu\text{g}/\text{m}^3$ over an 8-hour weighted period. These regulations require implementation of engineering and work practice controls such as respiratory protection, protective clothing, housekeeping, hygiene practices, and signage requirements to meet worker exposure limits. Survey and cleanup must be conducted by state-certified consultants and contractors.

Prior to the issuance of a grading permit or demolition permit, the entity performing the work is required to show proof that a Certified Lead Inspector/Assessor, as defined in Title 17, CCR Section 35005, and in accordance with all applicable laws pertaining to the handling and disposal of lead-based paint, has been retained to perform demolition and removal of all existing on-site structures identified to contain lead-based materials. Lead-based materials exposure is regulated by Cal/OSHA. Title 8 CCR Section 1532.1 requires testing, monitoring, containment, and disposal of lead-based materials so that exposure levels do not exceed Cal/OSHA standards.

California's Universal Waste Rule

California's Universal Waste Rule (22 CCR 66261.9, 66273.1 through 66273.20) allows individuals and businesses to transport, handle and recycle certain common hazardous wastes, termed universal wastes, in a manner that differs from the requirements for most hazardous wastes. The more relaxed requirements for managing universal wastes were adopted to ensure that they are managed safely and are not disposed of in the trash.

Universal wastes are hazardous wastes that are widely produced by households and many different types of businesses. Universal wastes include televisions, computers and other electronic devices as well as batteries, fluorescent lamps, mercury thermostats, and other mercury containing equipment, among others. Fluorescent light tubes, ballasts, and switches may contain PCBs and/or mercury, especially older fixtures.

Conditionally Exempt Small Quantity Universal Waste Generators are exempt from most of the requirements of the universal waste regulations provided they comply with certain conditions (22 CCR 66273.8). The trigger quantity for PCBs and/or mercury-containing materials would be less than 100 kilograms (220 pounds) as a RCRA hazardous waste, including universal waste that is RCRA universal waste and less than one kilogram of acutely hazardous waste in a calendar month. (RCRA hazardous waste is hazardous waste that is regulated under the hazardous waste regulations adopted by the USEPA.) Handlers who qualify for these exemptions are not required to obtain an EPA ID number or otherwise notify DTSC, keep records of shipments or provide annual reports to DTSC, or to label their universal waste.

A Conditionally Exempt Small Quantity Universal Waste Generator may not send universal waste to a municipal solid waste (garbage) landfill or a non-hazardous waste recycling center. All handlers of universal waste must relinquish their universal waste to one of the following:

1. Another handler (typically a business that specializes in collecting, storing, accumulating and shipping universal wastes). Examples include a household hazardous waste (HHW) facility, a "Take-It-Back Partner" such as a retailer or manufacturer, or a collection event.
2. A universal waste transporter. Examples include a curbside HHW collection program, a package service (e.g., postal service, UPS), or a destination facility that offers a pick-up service.
3. A universal waste destination facility (generally, a facility with a permit to treat, store, or dispose of hazardous waste).

Search engines available to find locations accepting universal waste in the local area include E-Recycle.org; Earth911.org; the CalRecycle database; DTSC; and HHW list.

Local

Unified Hazardous Waste and Hazardous Materials Management Regulatory Program

The Unified Program, codified in Health and Safety Code Sections 25404 et seq., requires the administrative consolidation of six hazardous materials and waste programs under one agency, a CUPA. The following programs are consolidated under the unified program:

- Hazardous Materials Release Response Plans, and Inventory (also referred to as Hazardous Materials Business Plans)
- California Accidental Release Program
- Underground Storage Tanks
- Aboveground Petroleum Storage Spill Prevention Control and Countermeasures
- Hazardous Waste Generation and Onsite Treatment
- Uniform Fire Code Plans and Inventory Requirements

The State Secretary for Environmental Protection designated the LACFD HHMD as the CUPA. The CUPA is charged with the responsibility of conducting compliance inspections of over hazardous materials facilities in Los Angeles County, including the city of Carson. These facilities handle hazardous materials, generate or treat a hazardous waste, and/or operate underground storage tanks. The CUPA uses education and enforcement to minimize the risk of chemical exposure to human health and the environment. The CUPA forwards important facility information to local fire prevention agencies that enables them to take appropriate protective action in the event of an emergency at regulated facilities. In order to legally store and use hazardous materials above the trigger quantities, users must apply for permits and demonstrate satisfactory compliance with regulations. The quantities that trigger disclosure are based on the maximum quantity on site at any time:

- 55 gallons, 500 pounds, or 200 cubic feet for 30 days or more at any time in the course of a year
- Any amount of hazardous waste
- Category I or II pesticides
- Explosives
- Extremely hazardous substances above the threshold planning quantity

Asbestos NESHAP Regulations – Building Demolitions & Renovations

The National Emission Standards for Hazardous Air Pollutants (NESHAP) are a series of pollutant specific regulations which are designed to minimize the public's exposure to hazardous chemicals through use of specific types of control equipment, and the implementation of various control methods or procedures. The SCAQMD has been delegated by the USEPA to enforce the NESHAP provisions within its tri-county jurisdiction, which includes the city of Carson. The SCAQMD administers all of the NESHAP regulations including the sections applicable to the demolition and renovation of building structures which utilized ACM in their construction.

The Asbestos NESHAP regulations pertain to all public and commercial structures, and applies to residential properties consisting of five or more dwelling units. Many of these buildings, regardless of their age, utilized ACM in their construction. Examples of ACM include, but are not limited to, paper backing of linoleum, spray-on acoustic ceilings, and duct wrap on pipes and boilers. When these types of materials are disturbed during demolition or renovation activities, asbestos fibers may be released into the air which can create a significant health hazard.

The Asbestos NESHAP (40 CFR Part 61, Subpart M) and District Rules and Regulations require persons, agencies, and companies to determine if ACM is present in structures prior to renovation or demolition activities. An evaluation, or survey, must be performed to determine if asbestos is present. According to State law, only surveys prepared by California State Certified Asbestos Consultants (CAC) are accepted by the District. Testing for asbestos can be done by a recognized Asbestos Testing Lab.

If asbestos is found to be present, the District must receive written notification at least 10 business days prior to beginning work. In order to minimize the release of asbestos fibers, certain work practices are required to be used. Persons who may be exposed to fibers are required to wear personal protective equipment. The Asbestos Compliance Advisory and Requirement Flow Chart provide general guidance, but are not meant as a substitute for advice from asbestos professionals or legal counsel.

Compliance with the Asbestos NESHAP includes the following actions:

- Inspect the area that will be disturbed for ACM. The survey must be performed by a California State CAC, or a person assigned by the CAC who operates under the control and responsibility of the CAC. The survey results must be thoroughly documented in a signed report from the CAC.
- Notify the District if more than 260 linear feet, 160 square feet, or 35 cubic feet of Regulated Asbestos Containing Material (RACM) is going to be disturbed; or if Category I or II material will be rendered friable by the work methods employed.
- The District will not accept asbestos surveys that do not include: A project drawing denoting the area being renovated or demolished, the numbered location, on the project drawing, of every asbestos sample, the CAC's OSHA Certification Number, date when the CAC's current OSHA Certification expires.
- Notify the District at least 10 working days prior to any demolition, even if no RACM is present.
- Employ the use of proper work practices outlined in the asbestos NESHAP.
- Comply with worker safety requirements (Cal/OSHA).

3.8.4 Project Impact Analysis

Thresholds of Significance and Methodology

Thresholds of Significance

Appendix G of the State CEQA Guidelines provides screening questions that address potential impacts related to a number of environmental issues. The CEQA guidelines provides that lead

agencies may use the questions set forth in the Appendix G to assess the significance of a project's environmental effects, and the use of Appendix G as a significance threshold is routinely sanctioned by the courts (although such use is not mandatory). Based on the Appendix G questions regarding hazards and hazardous materials, a project would have a significant impact if the project would:

- Threshold HAZ-1:** Create a significant hazard to the public or the environment through the routine use, transport, disposal, or accidental release of hazardous materials;
- Threshold HAZ-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 HAZ-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 environment;
- Threshold HAZ-4:** For a project located within an airport land use plan or, where such plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard or excessive noise for people residing in or working in the project area;
- Threshold HAZ-5:** Impair implementation of or interfere with an adopted emergency response plan or emergency evacuation plan; or
- Threshold HAZ-6:** Expose people or structures, either directly or indirectly, to a significant risk of loss, injury, or death involving wildland fires.

Methodology

Information for this assessment of impacts to workers, the public, or the environment relative to hazards and hazardous materials is based on a review of information from hazardous materials databases, maps showing airports, schools, and fire hazard zones, and City and County plans.

The project would be regulated by the various laws, regulations, and policies summarized in the Regulatory Framework above. Compliance by the project with applicable federal, State, and local laws and regulations is assumed in this analysis, and local and state agencies would be expected to continue to enforce applicable requirements to the extent that they do so now. It should be noted that compliance with many of the regulations is a condition of permit approval.

A significant impact would occur if, after considering the features described in Chapter 2, *Project Description*, including the proposed updates to the City's General Plan, and the required compliance with regulatory requirements, a significant impact would still occur. For those impacts considered to be significant, mitigation measures are proposed to reduce the identified impacts.

Project Impact Analysis

Routine Use, Transportation, Disposal, or Accidental Release of Hazardous Materials

Threshold HAZ-1: The Project would have a significant impact if future development allowed by Carson2040 would create a significant hazard to the public or the environment through the routine use, transport, disposal, or accidental release of hazardous materials.

Impact HAZ-1: *The Project would not create a significant hazard to the public or the environment through the routine use, transport, disposal, or accidental release of hazardous materials. (Less than Significant)*

Construction

During the construction phase of a project, construction equipment and materials would include fuels, oils and lubricants, solvents and cleaners, cements and adhesives, paints and thinners, degreasers, cement and concrete, and asphalt mixtures, which are all commonly used in construction. Routine uses of any of these substances could pose a hazard to people or the environment and would be considered potentially significant.

Construction activities would be required to comply with numerous hazardous materials regulations designed to ensure that hazardous materials are transported, used, stored, and disposed of in a safe manner to protect worker safety, and to reduce the potential for a release of construction-related fuels or other hazardous materials into the environment, including stormwater and downstream receiving water bodies. Contractors would be required to prepare and implement HMBPs that would require that hazardous materials used for construction would be used properly and stored in appropriate containers with secondary containment to contain a potential release. In Los Angeles County, HMBPs are submitted to the local CUPA, LACFD HHMD, for their review for compliance with hazardous materials regulations. The California Fire Code would also require measures for the safe storage and handling of hazardous materials, which are included in the CUPA review of HMBPs.

Construction contractors would be required to prepare a SWPPP for construction activities according to the National Pollutant Discharge Elimination System (NPDES) General Construction Permit requirements. The SWPPP would list the hazardous materials (including petroleum products) proposed for use during construction; describe spill prevention measures, equipment inspections, equipment and fuel storage; protocols for responding immediately to spills; and describe BMPs for controlling site runoff. The SWPPP would be submitted to the RWQCB, which would review both the SWPPP and the required inspection reports for compliance with the Construction General Permit.

In addition, the transportation of hazardous materials would be regulated by the USDOT, Caltrans, and the CHP. Together, federal and state agencies determine driver-training requirements, load labeling procedures, and container specifications designed to minimize the risk of accidental release.

Next, in the event of a spill that releases hazardous materials at a project site, a coordinated response would occur at the federal, state, and local levels. The LACFD HHMD is the local hazardous materials response team. In the event of a hazardous materials spill, the police and fire departments would be simultaneously notified and sent to the scene to respond and assess the situation.

Finally, implementation of some projects may include the demolition and removal of existing buildings and structures. As discussed above in Section 3.8.2, *Environmental Setting*, some buildings and structures may include hazardous building materials, such as ACM, LBP, PCBs, mercury, and Freon. If improperly managed, the demolition activities could result in exposures to construction workers, the public, and the environment.

Numerous existing regulations require that demolition and renovation activities that may disturb or require the removal of materials that consist of, contain, or are coated with ACM, LBP, PCBs, mercury, Freon, and other hazardous materials must be inspected and/or tested for the presence of hazardous materials. If present, the hazardous materials must be managed and disposed of in accordance with applicable laws and regulations. Compliance with existing regulations is a condition of demolition and construction permits. Section 3.8.3, *Regulatory Framework*, discusses the pertinent regulations.

In the case of ACM and LBP, all work must be conducted by a State-certified professional, which would ensure compliance with all applicable regulations. If ACM and/or LBP are determined to exist onsite, a site-specific hazard control plan must be prepared detailing removal methods and specific instructions for providing protective clothing and equipment for abatement personnel. A State-certified LBP and/or an ACM removal contractor would be retained to conduct the appropriate abatement measures as required by the plan. Wastes from abatement and demolition activities would be disposed of at a landfill permitted to accept such waste. Once all abatement measures have been implemented, the contractor would conduct a clearance examination and provide written documentation to the appropriate regulatory agency documenting that testing and abatement have been completed in accordance with all federal, State, and local laws and regulations.

Equipment and materials with PCBs, mercury, and Freon, are managed thru the Universal Waste Rule. In the case of PCBs, electrical transformers and older fluorescent light ballasts not previously tested and verified to not contain PCBs must be tested. If PCBs are detected above action levels, the materials must be disposed of at a licensed facility permitted to accept the materials. In the case of mercury in fluorescent light tubes and switches, the identification, removal, and disposal of the materials must be removed without breakage and disposed of at a licensed facility permitted to accept the materials. In the case of Freon or other refrigerants, the refrigerants must be directed to licensed recycling and reuse facilities permitted to handle the refrigerants.

Compliance with the numerous laws and regulations discussed above that govern the transportation, use, handling, and disposal of hazardous building materials would limit the potential for impacts due to the transportation, use, handling, disposal, or accidental release of hazardous building materials, and thus this impact would be less than significant.

Operation

Once constructed, projects operating within the city of Carson may use chemicals associated with their particular business, some of which may be hazardous materials. The routine use or an accidental spill of hazardous materials could result in inadvertent releases, which could adversely affect construction workers, the public, and the environment.

Businesses that use hazardous materials would be required to prepare and implement a HMBP that would require that hazardous materials used in operations be used properly, stored in appropriate containers with secondary containment to contain a potential release, and disposed of at facilities permitted to accept the waste. All hazardous materials are required to be stored and handled according to manufacturer's directions and local, State and federal regulations. The California Fire Code would also require measures for the safe storage and handling of hazardous materials. In addition, businesses would be required to comply with the local MS4 permit development standards, which would reduce pollutants and runoff flows from new developments using BMPs and LID/post-construction standards.

The proposed General Plan update also includes Guiding Policies CSES-G-7 and CSES-G-14 through CSES-G-16 and Implementing Policies CSES-P-25 through CSES-P-30, CSES-P-33, and CSES-P-35, which would "minimize the threat to the public health and safety and to the environment posed by a release of hazardous materials," would help to reduce any impacts associated with the use, transportation, disposal, or accidental release of hazardous materials.

Compliance with the numerous laws and regulations discussed above that govern the transportation, use, handling, and disposal of hazardous materials would limit the potential for impacts due to the transportation, use, handling, disposal, or accidental release of hazardous materials, and thus this impact would be less than significant.

Proposed General Plan Policies that Address the Impact

Community Services, Education, and Safety

Guiding Policies

- | | |
|-----------|---|
| CSES-G-7 | Provide a safe environment to live, work, and play for Carson residents and visitors. |
| CSES-G-14 | Protect Carson residents and workers from hazardous material exposure and minimize the threat to the public health and safety and to the environment posed by a release of hazardous materials. |
| CSES-G-15 | Strive to minimize the effects from natural and anthropogenic disasters to reduce, to the extent possible, the social, safety, health, and economic impacts that these may have on the community. |
| CSES-G-16 | Continue mitigating against and restricting hazardous material usage in efforts to reduce pollution and hazard burden on Carson residents |

Implementing Policies

- CSES-P-25 Coordinate with other jurisdictions and agencies on disaster preparedness regarding heavy industrial uses, including incidents related to the transportation of hazardous materials, pipelines, oil fields, refineries, fires, and methane gas, among others
- CSES-P-26 Minimize the threat to public health and safety and the environment through strict enforcement of rules and regulations and by working closely with first responders
- CSES-P-27 Minimize the threat of a release of hazardous materials through strict enforcement of rules and regulations, monitoring business operations which handle hazardous materials through the permitting process, and identifying emergency procedures and evacuation routes
- CSES-P-28 Regulate development on sites with known contamination of soil or groundwater to ensure that construction workers, future occupants, adjacent residents, and the environment are adequately protected from hazards associated with contamination
- CSES-P-29 Continue to require remediation of hazardous material releases from previous land uses as part of any redevelopment activities
- CSES-P-30 Continue to work with various City departments and other jurisdictions, including the Public Safety Services and County Fire and Sheriff's Departments, to provide Carson residents with updated information regarding emergency preparedness and disaster planning regarding seismic events and responses to hazards.
- CSES-P-33 Strictly enforce federal, State and local laws and regulations relating to the use, storage, and transportation of toxic, explosive, and other hazardous and extremely hazardous materials to prevent unauthorized discharges.
- CSES-P-35 Support environmental remediation of contaminated soils and hazardous waste sites.

Circulation

Guiding Policies

- CIR-G-4 Encourage the development of a multimodal freight transportation system that balances the need for effective and efficient transportation of goods with the health and wellbeing of the community.

Implementing Policies

- CIR-P-28 Focus truck traffic onto appropriate arterial corridors in the City by clearly marking truck routes and posting appropriate signage to provide for the effective transport of goods while minimizing negative impacts on local circulation and noise-sensitive land uses. While the City has identified truck routes (Figure 3-8), the designation of truck routes does not prevent trucks from using other roads or streets to make deliveries to individual addresses. Seeking community input around the issue and general observation of traffic patterns as online shopping and associated deliveries increase in the future will help in developing strategies to reduce use of non-designated corridors and limit disruption and potentially regulate truck movement.

- CIR-P-29 Retain and strengthen ordinances restricting trucks from residential neighborhoods, using strategies such as time-of-day restrictions.
- CIR-P-30 Conduct a study reviewing truck routes that are designated adjacent to residential neighborhoods. The City of Carson will explore where truck routes are redundant or unnecessary and could be removed without negative impacts to other residential neighborhoods. Segments of truck routes adjacent to residential neighborhoods are shown in Figure 3-9.

Mitigation Measures

None required.

Emit Hazardous Emissions, Handle Hazardous Materials, etc., near a School

Threshold HAZ-2: The Project would have a significant impact if future development allowed by Carson2040 would emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school.

Impact HAZ-2: *The Project would not result in hazardous emissions or the handling of hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school. (Less than Significant)*

As discussed above in Section 3.8.2, *Environmental Setting*, there are numerous schools within the city limits, and many projects associated with the proposed General Plan update would likely be located within one-quarter mile of one or more schools. The construction and operations activities discussed in Impact HAZ-1 could include the use of hazardous materials. If the site using hazardous materials is located within one-quarter mile of a school, a release could adversely affect a school. However, as discussed in Impact HAZ-1, required compliance with the numerous laws and regulations that govern the transportation, use, handling, and disposal of hazardous materials and adherence with proposed General Plan Guiding Policies CSES-G-7 and CSES-G-14 through CSES-G-16 and Implementing Policies CSES-P-25 through CSES-P-30, CSES-P-33, and CSES-P-35 would limit the potential for creation of hazardous conditions due to the use or accidental release of hazardous materials, and would render this impact less than significant.

Proposed General Plan Policies that Address the Impact

Guiding Policies CSES-G-7, CSES-G-14, CSES-G-15, and CSES-G-16, and Implementing Policies CSES-P-25, CSES-P-26, CSES-P-27, CSES-P-28, CSES-P-29, CSES-P-30, CSES-P-33, and CSES-P-35, as discussed under Impact HAZ-1.

Mitigation Measures

None required.

Included on a List of Hazardous Materials Sites

Threshold HAZ-3: The Project would have a significant impact if future development allowed by Carson2040 would 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 environment.

Impact HAZ-3: *The Project would not create a significant hazard to the public or environment from a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5. (Less than Significant)*

As discussed above in Section 3.8.2, *Environmental Setting*, both active and closed hazardous materials investigation and cleanup sites are located within the city limits. Active sites are currently undergoing investigation and cleanup. If a project is located on or near an active site, the construction activities may encounter soil and/or groundwater with chemical concentrations above screening levels that could adversely affect workers, the public, and the environment. In addition, although the closed sites would not be anticipated to have chemicals in soil and/or groundwater at concentrations above screening levels, construction activities may encounter residual levels of chemicals. Finally, construction activities could also encounter currently unknown hazardous materials that are not currently listed, but would be upon their discovery.

The impact of encountering hazardous materials would be reduced to less than significant through the implementation of proposed General Plan Guiding Policies CSES-G-7 and CSES-G-14 through CSES-G-16 and Implementing Policies CSES-P-25 through CSES-P-30, CSES-P-33, and CSES-P-35, which requires the minimization of threats to the public health and safety and to the environment posed by a release of hazardous materials. Compliance with these policies and applicable regulations would ensure that plans would be in place that provide procedures for the testing, handling, disposal, and remediation of hazardous materials. Therefore, the impact would be less than significant.

Proposed General Plan Policies that Address the Impact

Guiding Policies CSES-G-7, CSES-G-14, CSES-G-15, and CSES-G-16, and Implementing Policies CSES-P-25, CSES-P-26, CSES-P-27, CSES-P-28, CSES-P-29, CSES-P-30, CSES-P-33, and CSES-P-35, as discussed under Impact HAZ-1.

Mitigation Measures

None required.

Airport Land Use Plan Conflicts

Threshold HAZ-4: The Project would have a potentially significant impact if future development allowed by Carson2040 would be located within an airport land use plan or, where such plan has not been adopted, within two miles of a public airport or public use airport, and the project would result in a safety hazard or excessive noise for people residing in or working in the project area.

Impact HAZ-4: *The Project would not be located within an airport land use plan or, where such plan has not been adopted, within two miles of a public airport or public use airport. (Less than Significant)*

As discussed above in Section 3.8.2, *Environmental Setting*, the Compton/Woodley Airport is the only airport located within two miles of the city limits. The Compton/Woodley Airport is included in the Los Angeles County Airport Land Use Plan (ALUP), which requires that new development in the city not fall within the airports noise contours or airport influence area. Per the requirements of the Los Angeles County ALUP, new non-conforming land uses or major new development projects would be subject to review for compatibility by the County's Airport Land Use Commission. The ALUP contains designated zones within which certain off-airport activities would be deemed incompatible, such as the construction of structures that exceed certain heights, facilities that could attract birds and other wildlife that could pose a hazard to aviation, and the construction of uses that would be at risk in the event of an aviation accident (schools, hospitals, etc.). By law, the Commission is vested with the legal authority to require modification of proposed projects that could conflict with safe and efficient airport operations. Accordingly, if any off-airport projects are proposed within these designated zones, they would be required to undergo review and approval by the Commission, and a determination of consistency with the ALUP would have to be made. As such, new projects in the vicinity of the airport would need to be consistent with the ALUP, and safety hazards for people working and/or residing in the area would be avoided. Additionally, the implementation of proposed General Plan Guiding Policies NO-G-1 and NO-G-2 and Implementing Policy NO-P-1, would ensure maximum efficiency in noise abatement efforts, would reduce any impacts associated with noise hazards.

Accordingly, development associated with the proposed General Plan update would not place people or structures in such a manner as to create a safety or noise hazard. The impact would therefore be less than significant.

Proposed General Plan Policies that Address the Impact

Noise

Guiding Policies

- | | |
|--------|---|
| NO-G-1 | Maintain healthy sound environments and protect noise-sensitive uses from excessive noise exposure. |
| NO-G-2 | Continue efforts to incorporate noise considerations into land use planning decisions and guide the location and design of noise-generating facilities, such as transportation and industrial facilities, to minimize the effects of noise on adjacent land uses. |

Implementing Policies

NO-P-1 Use the noise and land use compatibility matrix (Table 9-1) and Future Noise Contours map (Figure 3.11-4 in Section 3.11 of the EIR) as criteria to determine acceptability of a land use. Seek to limit new noise-sensitive uses—including schools, hospitals, places of worship, and homes—where noise levels exceed “Normally Acceptable” or “Conditionally Acceptable” levels if alternative locations are available for the uses in the City, or impose appropriate mitigation measures to bring noise levels down to acceptable levels.

Mitigation Measures

None required.

Impairment or Interference with Emergency Response Plan

Threshold HAZ-5: The Project would have a potentially significant impact if future development allowed by Carson2040 would impair implementation of or interfere with an adopted emergency response plan or emergency evacuation plan.

Impact HAZ-5: *The Project would not impair implementation of or interfere with an adopted emergency response plan or emergency evacuation plan. (Less than Significant)*

The proposed General Plan update includes Implementing Policies CSES-P-27, CSES-P-30 through CSES-P-32, and CSES-P-34, which would require the City to ensure emergency planning, designated evacuation routes, safe access routes to communication centers, hospitals, airports, staging areas, and fuel storage sites, and that projects provide adequate road standards, driveway widths, and road clearances around structures consistent with local and State requirements to ensure adequate emergency access. New projects would be required to be consistent with these policies. Therefore, the impact relative to proximity to an emergency response or evacuation would be less than significant.

Proposed General Plan Policies that Address the Impact

Implementing Policies CSES-P-27 and CSES-P-30 as discussed under Impact HAZ-1, in addition to the following:

Community Services, Education, and Safety

Implementing Policies

CSES-P-31 Maintain and update as necessary or produce plans that specifically address hazards and that identifies emergency response and recovery actions in the event of an incident. Such plans include the State Emergency Management System (SEMS) Multi-Hazard Function Plan and the Natural Hazards Mitigation Plan.

Potential funding source includes the State of California Governor’s Office of Emergency Services (Cal OES).

CSES-P-32 Review neighborhood access needs and ensure safe evacuation routes, especially for residential areas near refineries and heavy industry.

CSES-P-34 Continue coordination efforts with the LACFD to ensure their capability to address fires and other emergencies at refineries, tank farms, and other heavy industrial facilities within the City.

Circulation

Implementing Policies

CIR-P-10 Direct commuter traffic to move through the city primarily on arterial streets, and on collector streets as appropriate. Consider traffic calming strategies.

CIR-P-11 Encourage the use of neighborhood traffic management tools to mitigate neighborhood intrusion by commuter traffic and improve conditions for pedestrians and bicyclists.

Mitigation Measures

None required.

Wildland Fire Hazards

Threshold HAZ-6: The Project would have a potentially significant impact if future development allowed by Carson2040 would expose people or structures, either directly or indirectly, to a significant risk of loss, injury, or death involving wildland fires.

Impact HAZ-6: *The Project would not expose people or structures, either directly or indirectly, to a significant risk of loss, injury, or death involving wildland fires. (No Impact)*

According to the map of Very Fire Hazard Severity Zones in LRA for Los Angeles County, the city of Carson is not within a VHFHSZ, nor is it in the vicinity of one.

Nevertheless, all construction activities would be required to comply with all applicable fire protection and prevention regulations specified in the California Fire Code, Hazardous Materials Transportation regulations, and Cal/OSHA regulations. These requirements include various measures such as accessibility of firefighting equipment, proper storage of combustible liquids, no smoking in service and refueling areas, and worker training for firefighter extinguisher use. In addition, proposed General Plan Implementing Policy CSES-P-34, which serves to minimize the effects from natural and urban disasters to reduce impacts to the community, requires coordination efforts with the LACFD to ensure their capability to address fires. Compliance with all applicable regulations and plans would further minimize the potential for construction activities to cause a wildland fire.

The proposed General Plan update also includes Implementing Policies CSES-P-27, CSES-P-30 through CSES-P-32, and CSES-P-34, which serve to identify, establish, and maintain safe emergency procedures and evacuation routes. These policies would encourage greater cooperation with LACFD to ensure their capability to address fires and other emergencies. In addition, facilities that use or store hazardous and flammable materials would be required to comply with all applicable fire codes and fire protection requirements established by the California Fire Code, Hazardous Materials Transportation regulations, and Cal/OSHA

requirements. As such, the operation of projects would not substantially increase the risk of wildland fires within the project area.

For these reasons, the Project would not expose people or structures, either directly or indirectly, to a significant risk of loss, injury, or death involving wildland fires, and thus there would be no impact.

Proposed General Plan Policies that Address the Impact

Implementing Policies CSES-P-27 and CSES-P-30 as discussed under Impact HAZ-1, and Implementing Policies CSES-P-31, CSES-P-3-32, and CSES-P-34 as discussed under Impact HAZ-5.

Mitigation Measures

None required.

3.8.5 Cumulative Impact Analysis

Impacts associated with hazardous materials are often site-specific and localized. However, for purposes of this cumulative analysis, the geographic context for cumulative hazards impacts would vary depending on threshold and is identified in the discussions below.

Routine Use, Transportation, Disposal, or Accidental Release of Hazardous Materials

The geographic context for an analysis of impacts pertaining to the routine transport of hazardous materials and reasonably foreseeable risk of upset and accident conditions includes the city of Carson, as well as a geographic area outside city limits, as hazardous materials and waste would be transported into the city from various locations outside city limits and to off-site disposal sites. Large quantities of hazardous materials could be taken to any one of numerous hazardous materials disposal facilities in southern California, or even out of state. While remote, it is possible that routine transport of hazardous materials and waste development both within and outside of the city could result in the release of hazardous materials from an accident or that the development of new sites could release contamination if the sites had been previous contaminated, and thus resulting in a potentially significant cumulative impact.

All demolition activities in the city involving removal or disturbance of PCBs ACM, LBP, must comply with SCAQMD Rule 1403 and OSHA Construction Safety Orders, which would reduce impacts related to hazardous building materials. Site-specific investigations would be conducted at sites where contaminated soils or groundwater could occur to minimize the exposure of workers and the public to hazardous substances. All projects being developed in conjunction with the proposed General Plan update would be required to comply with all applicable federal, State, and local regulations related to hazardous materials. Finally, once constructed and operational, all projects the use, store, transport, or dispose of hazardous materials would be require to prepare and comply with the requirements of a HMBP, approved by the CUPA. For these reasons, the Project's contribution to this cumulative impact would not be cumulatively considerable.

Emit Hazardous Emissions, Handle Hazardous Materials, etc., near a School

The geographic context for an analysis of cumulative impacts relative to hazardous emissions within 0.25 mile of an existing or proposed school would be the service area of the Compton Unified School District and the Los Angeles Unified School District. While remote, it is possible that the routine transport of hazardous materials and waste could result in the release of hazardous materials from an accident near a school site or that the development of new sites could release contamination near a school site if the sites had been previous contaminated, thus resulting in a potentially significant cumulative impact.

Compliance with the same federal, state, and local regulation related to hazardous materials would apply when considering the risks to schools as well. All activities involving the transport, use, disposal, or accidental release of hazardous materials and waste would be regulated to reduce impacts related to handling hazardous materials and waste near a school. Therefore, the Project's contribution to this cumulative impact would not be cumulatively considerable.

Hazardous Materials Sites

The geographic context for an analysis of development on identified hazardous materials sites is the city of Carson, as these impacts are localized and site specific. Past development has occurred on sites listed on hazardous materials databases, but compliance with federal, State, and local regulations and appropriate remediation of these sites has reduced any impact to human and environmental health. Regulations would include required site investigations for sites that have been exposed to past contamination. If contamination exceeds regulatory action levels, the proponent would be required to undertake remediation procedures prior to grading and development through a cleanup program under the supervision of the LACFD HHMD, DTSC, or RWQCB (depending upon the nature of any identified contamination). As a result, the cumulative impact related to development of sites identified on a list of hazardous materials sites would be less than significant.

Emergency Response or Evacuation Plan

The geographic context for the analysis of potentially significant impacts involving impairment or interference with an adopted emergency response or evacuation plan would be the city of Carson. Projects that involve road repairs and road closures could impact emergency response or evacuation plans. However, all new projects would be subject to the same federal, State, and local traffic regulations, which would ensure this cumulative impact would be less than significant.

Wildland Fire

The geographic context for an analysis of risk from wildland fires is the city of Carson. The Planning Area is not within a VHFHSZ, nor is one mapped in the vicinity. Therefore, no cumulative impact associated with wildland fire would occur.

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3.9 Hydrology and Water Quality

3.9.1 Introduction

This section provides an analysis of potential environmental impacts with respect to hydrology, water quality, and drainage from future development allowed under the Project. The section also discusses the existing hydrological and water quality conditions in the Planning Area, as well as relevant federal, state, and local regulations and programs.

No comments were received in response to the Notice of Preparation (NOP) and Recirculated NOP regarding hydrology and water quality.

3.9.2 Environmental Setting

Surface Water

Hydrologic Setting

The city of Carson is located in the South Bay region of southern Los Angeles County, approximately 13 miles south of downtown Los Angeles. The California Department of Conservation has divided California into 10 hydrologic regions, where the city is located in the Los Angeles Region of the Regional Water Quality Control Board (RWQCB).¹ A hydrologic region is the area drained by a river system or a segment of a river system, a closed basin(s), or a group of streams forming a coastal drainage area. The Los Angeles Region encompasses all coastal drainages flowing to the Pacific Ocean between Rincon Point (on the Coast of Western Ventura County) and the eastern Los Angeles County line, as well as the drainages of five coastal islands (Anacapa, San Nicolas, Santa Barbara, Santa Catalina, and San Clemente). The region also includes all coastal waters within three miles of the continental and island coastlines.

A watershed is the area of land where all of the water that is under it or drains off of it goes into the same place. Los Angeles County includes part or all of six major watersheds.² The city of Carson falls within the Dominguez Watershed, which encompasses approximately 133 square miles in southwestern Los Angeles County; 120 square miles is land and the rest is the Los Angeles/Long Beach Harbors. The watershed is composed of three sub-watershed drainage areas; Upper Dominguez Channel, Lower Dominguez Channel and Estuary, and Los Angeles and Long Beach Harbors including Machado Lake.³ The sub-watersheds drain primarily via an extensive network of underground storm drains. The Upper Dominguez Channel drains into the Dominguez Channel, while the Lower Dominguez Channel drains directly into the Los Angeles and Long

¹ County of Los Angeles, 2014. Los Angeles County General Plan Update Draft Environmental Impact Report. Figure 5.9-1, Hydrologic Regions. Available at: https://planning.lacounty.gov/assets/upl/project/gp_2035_deir.pdf. Accessed August 2021.

² County of Los Angeles, 2014. Los Angeles County General Plan Update Draft Environmental Impact Report. Figure 5.9-2, Major Watersheds. Available at: https://planning.lacounty.gov/assets/upl/project/gp_2035_deir.pdf. Accessed August 2021.

³ Dominguez Channel Watershed Management Area Group, 2014. Draft Coordinated Integrated Monitoring Program For The Dominguez Channel Watershed Management Area Group. Available at: http://www.waterboards.ca.gov/losangeles/water_issues/programs/stormwater/municipal/watershed_management/dominguez_channel/DominguezChannel_CIMP.pdf. Accessed May 2021.

Beach Harbor Area. A majority of the city of Carson is located within the lower Dominguez Channel and Estuary sub-watershed drainage area, with the southwestern portion of the city located in the Los Angeles and Long Beach Harbor area, including the Machado Lake sub-watershed drainage area.

Surface Water Quality

The 2014–2016 Clean Water Act Section 303(d) List of Impaired Waters, approved by the United States Environmental Protection Agency (USEPA) in 2018 and current as of 2022, is a combined list of all water quality limited segments (WQLSs) and associated pollutants identified by the State Water Resources Control Board (SWRCB) as requiring a total maximum daily load (TMDL) under Section 303(d). There are 128 water bodies in Los Angeles County on this list; of these, Dominguez Channel is the only water body located within the city of Carson that is on the 303(d) list. TMDLs, or the maximum amount of a pollutant that a water body can receive and still safely meet water-quality standards, have been developed for the Dominguez Channel, which is impaired by pollutants due to the watershed’s large, dense population and the amount of impervious ground surfaces. Pollutants present in the parts of the Dominguez Channel within city limits that require a TMDL or have completed a TMDL approved by the USEPA include:

- Benthic Community Effects;
- Fecal Indicator Bacteria;
- Metals/Metalloids: Copper, Lead;
- Organics: Benzo(a)anthracene, Benzo(a)pyrene (3,4-Benzopyrene -7-d), Chrysene (C1-C4), Polychlorinated biphenyls (PCBs), Phenanthrene, Pyrene;
- Pesticides: Chlordane (tissue), DDT (tissue and sediment), Dieldrin (tissue); and
- Toxicity.

Only Fecal Indicator Bacteria still requires a TMDL; the other pollutants are being addressed by an established and approved TMDL.

Stormwater Runoff

Stormwater runoff within the city of Carson is typical of urbanized areas and includes pollutants from motor vehicles and other transportation related uses (parking lots). Pollutants include fuels (e.g., gasoline and diesel), oil and grease, sediment, and heavy metals. Pollutants associated with landscape maintenance are also likely to be present in stormwater runoff. These pollutants include nutrients from fertilizers, herbicides, and pesticides. Trash is also an expected pollutant. Fecal coliform bacteria and other pollutants are also typically found in stormwater runoff from land uses similar to those within the city.

Pollutants of Concern Based on Receiving Water Impairment

Table 3.9-1, *Pollutants of Concern by Land Use*, summarizes typical pollutants of concern according to land use. The majority of the pollutants listed are from the February 2014 County of Los Angeles Department of Public Works (LACPWD) *Low-Impact Development Standards*

Manual. Other pollutants the EPA recognizes as typically associated with the land uses within the city are also included in the table.

**TABLE 3.9-1
 POLLUTANTS OF CONCERN BY LAND USE^{1,3}**

Land Use	Pollutants of Concern													
	Suspended Solids	Total Phosphorus	Total Nitrogen	Total Kjeldahl Nitrogen ²	Cadmium, Total ²	Chromium, Total ²	Copper, Total ²	Lead, Total ²	Zinc, Total ²	Biological Oxygen Demand (BOD) ⁴	Chemical Oxygen Demand (COD) ⁴	Fecal Coliform ⁴	Hydrocarbons ⁴	Trash ⁴
Commercial	X	X	X	X	°	°	X	X	X					
Industrial	X	X	X	X	°	°	X	X	X					
Streets, Roads	X	X	X	X	°	°	X	X	X					
Educational Facilities	X				°	°	X		X					
City of Carson	X	X	X	X	X	X	X	X	X	X	X	X	X	X

¹ Adapted from Table A-3 of the Technical Manual for Stormwater Best Management Practices in the County of Los Angeles (February 2004) and the Southern California Coastal Water Research Project Land Use-Specific Stormwater Monitoring Data. X = exceedance of "standard" by observed median/average concentration; blank = no exceedance of "standard" by observed median/average concentration.

² Derived from Table 11 of the 2012 Los Angeles County MS4 permit (page 104).

³ No available data to determine if these pollutants of concern originate from land use. Pollutant is assumed to be produced by this land use unless otherwise proven by the project applicant.

⁴ Based on 2006 EPA Guide to Stormwater Pollutant Concentrations.

SOURCE: Prepared by Environmental Science Associates.

There are several pollutants of concern related to the receiving body of water. As discussed above, the city of Carson is located within the lower Dominguez Channel and Estuary sub-watershed and the Los Angeles and Long Beach Harbors including Machado Lake sub-watershed drainage areas (the southwestern corner of the city of Carson is located in Machado Lake area). The Torrance Lateral also runs through the city. Water quality in the watershed was assessed using available monitoring data, TMDLs, 303(d) listed impairments, water quality thresholds listed in the Basin Plan for the Coastal Watersheds of the Los Angeles and Ventura Counties (Basin Plan) and the California Toxics Rule (CTR). Water-body pollutant combinations (WBPCs) were then categorized using the TMDLs, 303(d) listed impairments, and exceedance data for the Dominguez Channel Estuary and the Machado Lake portions. WBPCs for which there were monitoring data were placed into one of the following three categories as outlined in the National Pollution Discharge Elimination System (NPDES) permit:⁴

- Category 1 (Highest Priority): Water body-pollutant combinations for which TMDLs have been established.

⁴ The project is subject to the water quality standards and waste discharge requirements set out in Municipal Permit Order No. R4-2012-0175, NPDES Permit CAS004001, issued by the Los Angeles RWQCB

- Category 2 (High Priority): Pollutants for which data indicate water quality impairment in the receiving water according to the State's Water Quality Control Policy for Developing California's Clean Water Act Section 303(d) List (State Listing Policy).
- Category 3 (Medium Priority): Pollutants for which there are insufficient data to indicate water quality impairment in the receiving water according to the State's Listing Policy, but which exceed applicable receiving water limitations.

Stormwater Drainage

The LACPWD is the agency responsible for flood control protection within Los Angeles County. Drainage in the city of Carson includes storm drains that lead to the various flood control channels. Within the city of Carson, the flood control channels are the Dominguez Channel, Torrance Lateral, Wilmington Drain, McKinley Avenue Drain, Del Amo Channel, and Compton Creek.⁵ These are used exclusively for flood control and stormwater runoff.

Water Supply

Water supply to the city of Carson comes from the Metropolitan Water District (MWD) via the California Water Service Company's Dominguez District (Cal Water) and the Golden State Water Company (GSW). Cal Water serves most of the city of Carson with the GSW serving the northwest portion of the city. Both providers use a combination of local groundwater and surface water purchased from MWD, which is imported from the Colorado River and the State Water Project in Northern California, as well as recycled water from West Basin Municipal Water District (WBMWD). The Cal Water Dominguez water system includes 374 miles of pipeline, nine active wells, 12 storage tanks and seven MWD connections.⁶ The GSW water system includes 13 active wells and 12 MWD connections.⁷

Groundwater

The Coastal Plain of Los Angeles County is made up of two groundwater basins, the Central Basin and the West Coast Basin. These basins are comprised of Quaternary⁸ age sediments of gravel, sand, silt, and clay that were deposited from the erosion of nearby hills and mountains, and from beaches and shallow ocean floors that covered the area in the past. Underlying these sediments are basement rocks such as the Pliocene⁹ Pico Formation that generally do not provide sufficient quantities of groundwater. The Newport-Inglewood fault zone, which passes through the north-central portion of the city of Carson, in a southeast direction, serves as a water barrier separating the Central Basin and the West Coast Basin. The major groundwater recharge basins in the Central Basin are the Rio Hondo and San Gabriel Coastal Spreading Grounds along the Rio Hondo and the San Gabriel Rivers, in the city of Montebello and city of Pico Rivera.

⁵ County of Los Angeles Department of Public Works, 2021. Los Angeles County Storm Drain System. Available at: <http://dpw.lacounty.gov/fcd/stormdrain/index.cfm>, Accessed December 2021.

⁶ California Water Services, 2021. Rancho Dominguez District Information. Available at: <https://www.calwater.com/district-information/?dist=rd>, Accessed August 2021.

⁷ Golden State Water Company, 2021. Southwest Service Area 2020 Urban Water Management Plan. Available at: https://wuedata.water.ca.gov/public/uwmp_attachments/7646146476/GSWC-Southwest%202020%20UWMP%20Final.pdf. Accessed August 2021.

⁸ Quaternary time is from the present to 2.6 million years ago.

⁹ Pliocene time is from 2.6 million to 5.3 million years ago.

Groundwater recharge in the West Coast Basin is primarily done through injection wells. These two basins currently supply about 40 percent of the water used by the Los Angeles Region.¹⁰ Most of the city of Carson is located within the West Coast Basin, with a small portion of the city (northeastern corner of the Planning Area) located in the Central Basin.

The West Coast Basin covers approximately 160 square miles and is bounded on the west by the Santa Monica Bay, on the north by the Ballona Escarpment, on the east by the Newport-Inglewood Uplift, and on the south by San Pedro Bay and the Palos Verdes Hills. The basin was adjudicated in the 1960s; this limits the amount of water that can be withdrawn to prevent seawater intrusion and unhealthy groundwater levels. Aquifers in the West Coast Basin are generally confined and receive the majority of their natural recharge from adjacent groundwater basins or from the Pacific Ocean (seawater intrusion). The basin has an annual average production of approximately 52,000 acre-feet (AF) per year.¹¹

The Central Basin covers approximately 227 square miles of south-central Los Angeles County and is bounded on the north by a surface divide called the La Brea High, on the northeast and east by the Elysian, Repetto, Merced and Puente Hills, on the southeast by Coyote Creek, and on the southwest by the Newport Inglewood uplift. The Central Basin is divided into four sections—the Los Angeles Forebay, the Montebello Forebay, the Whittier Area, and the Pressure Area. The two forebays represent areas of unconfined aquifers that allow percolation of surface water down into the deeper production aquifers to replenish the rest of the basin. The Whittier Area and Pressure Area are confined aquifer systems that receive relatively minimal recharge from surface water, but are replenished from the upgradient forebay areas or other groundwater basins. The basin was also adjudicated in the 1960s¹² and has an annual average production of approximately 15,000 AF per year.¹³

Several aquifers occur within the vicinity of the city of Carson, including the deeper Lynwood, Silverado, and Sunnyside aquifers of the lower Pleistocene¹⁴ San Pedro Formation. Other shallower aquifers, which locally produce potable water, include the Gage and Gardena aquifers of the upper Pleistocene Lakewood Formation. The Silverado Aquifer is typically the main producing aquifer in both the West Coast and Central Basins, followed by the Lynwood and Sunnyside aquifers.¹⁵

The Water Replenishment District (WRD) manages the groundwater replenishment and groundwater quality activities for the West Coast and Central Basins. The WRD annually analyzes its monitoring well network to test for more than 100 water quality constituents, focusing on 11 key constituents that represent overall groundwater quality in the basins: total

¹⁰ Water Replenishment District of Southern California, 2021. Regional Groundwater Monitoring Report Water Year 2019–2020. March.

¹¹ West Basin Municipal Water District, 2021. West Coast Groundwater Basin. Available at: <https://www.westbasin.org/water-supplies/groundwater/west-coast-groundwater-basin/>, Accessed August 2021.

¹² Central Basin Municipal Water District, 2021. 2020 Urban Water Management Plan. July 2021.

¹³ Water Rights Calculator, 2021. The Central Basin. Available at: https://rights.wrd.org/central_basin. Accessed September 2021.

¹⁴ Pleistocene time is from 11,700 to 2.6 million years ago.

¹⁵ Water Replenishment District of Southern California, 2021. Regional Groundwater Monitoring Report Water Year 2019–2020. March.

dissolved solids (TDS), iron, manganese, chloride, nitrate, trichloroethylene (TCE), tetrachloroethylene (PCE), arsenic, perchlorate, hexavalent chromium, and 1,4-dioxane. Since 2018, WRD has also completed a district-wide assessment for presence of per- and polyfluoroalkyl substance (PFAS) constituents, which are also included in their water quality reports. Overall, groundwater in the Los Angeles Coast Basin continues to be of high quality that is suitable for potable and non-potable uses, with only some areas facing poor water quality due to natural or anthropogenic sources that WRD monitors.¹⁶

Depth to Groundwater

There are four individual wells (zones) that are screened in the following aquifers (from shallowest to deepest): Gage, Lynwood, and Silverado (two deepest zones) Aquifers, with depths ranging from 250 to 1,010 feet BGS. Water levels in Zone 1 track very similar to Zone 2 throughout the year and are the deep responding aquifers at this location. Zone 3 tracks similar to Zone 4. Groundwater elevations currently differ by about 25 feet between the upper two and lower two zones, which suggests the presence of a low permeability aquitard(s) between them that hydraulically isolate the shallow aquifers from the deeper ones. Water levels in Zones 1 and 2 both have decreased about 2 feet over the past water year 2019–2020 but have generally increased 30 feet over the past 21 years.¹⁷

Groundwater Contamination

The Central Basin and West Coast Basin are heavily utilized basins for groundwater supply. Overall, groundwater in the Central and West Coast basins continue to be of high quality, suitable for potable and non-potable uses. WRD production and monitoring wells were tested for the following constituents: total dissolved solids (TDS), iron, manganese, chloride, nitrate, trichloroethylene (TCE), tetrachloroethylene (PCE), arsenic, perchlorate, hexavalent chromium, and 1,4-dioxane.¹⁸

According to WRD data,¹⁹ nitrate levels exceeded the maximum contaminant level²⁰ (MCL) in 1 percent of the wells (2 out of 195) in the shallowest zones of the Central Basin and at less than 1 percent of wells (1 out of 112) in the West Coast Basin. TCE was detected above MCL levels in 6 wells out of 195 wells (3 percent) in the Central Basin and in 1 out of 112 wells (<1 percent) in the West Coast Basin. PCE was not detected in any wells. Arsenic exceed the MCL in 9 percent of the wells sampled (18 out of 195) in the Central Basin and in 4 percent of wells (5 out of 112) in the West Coast Basin. Perchlorate was detected in 1 out of 195 wells (<1 percent) in the Central Basin and in 1 out of 112 wells (<1 percent) in the West Coast Basin. Hexavalent Chromium was detected above the MCL in 3 out of 195 wells (2 percent) in the Central Basin.

¹⁶ Water Replenishment District of Southern California, 2021. Regional Groundwater Monitoring Report Water Year 2019–2020. March.

¹⁷ Water Replenishment District of Southern California, 2021. Regional Groundwater Monitoring Report Water Year 2019–2020. March.

¹⁸ Water Replenishment District of Southern California, 2021. Regional Groundwater Monitoring Report Water Year 2019–2020. March.

¹⁹ Water Replenishment District of Southern California, 2021. Regional Groundwater Monitoring Report Water Year 2019–2020. March.

²⁰ Maximum contaminant levels (MCLs) are standards set by the USEPA for drinking water quality. An MCL is the legal threshold limit on the amount of a substance that is allowed in a public water system.

Hexavalent Chromium was not detected in the West Coast Basin. Concentrations of 1,4-dioxane were detected above the notification level (NL) in 25 out of 195 wells (13 percent) in the Central Basin and was not detected above the NL in the West Coast Basin.

According to WRD data,²¹ TDS levels exceeded the Secondary Maximum Contaminant Level²² (SMCL) in 10 percent of wells tested (20 out of 195) in the Central Basin and 30 percent of wells tested (34 out of 112) in the West Coast Basin. Iron was detected above SMCL levels in the Central Basin in 14 out of 195 wells (7 percent) and 16 out of 112 wells (14 percent) in the West Coast Basin. Manganese was detected above the SMCL, in the Central Basin, in 28 percent of wells (55 out of 195) and in 45 percent of wells (50 out of 112) in the West Coast Basin. Chloride concentration exceeded the upper SMCL in 3 percent of wells in the Central Basin (5 out of 195 wells) and 25 percent of wells in the West Coast Basin (26 out of 112).

Flood Zone

Topography within the city is generally flat with elevations ranging from sea level to approximately 195 feet above mean sea level (msl) at the top of Dominguez Hills. The city is divided by the Dominguez Channel which is used for regional flood control. Floodplains are defined as an area of low-lying ground adjacent to a stream or river, stretching from the banks to the outer edges of the valley and subject to flooding. The city has floodplains around the Dominguez Channel. The main source of flooding for the city is from localized urban flooding caused by severe weather.

The Federal Emergency Management Agency (FEMA) is responsible for administration of the National Flood Insurance Program (NFIP) which creates flood zone insurance maps called a Flood Insurance Rate Map (FIRM), which identify flood hazards within a community. Five FIRM panels have been mapped to cover the city.²³ As shown on **Figure 3.9-1, Flood Hazard Map**, the majority of the central and eastern part of the city are located within an area of an annual chance flood of 0.2 percent (Zone X).

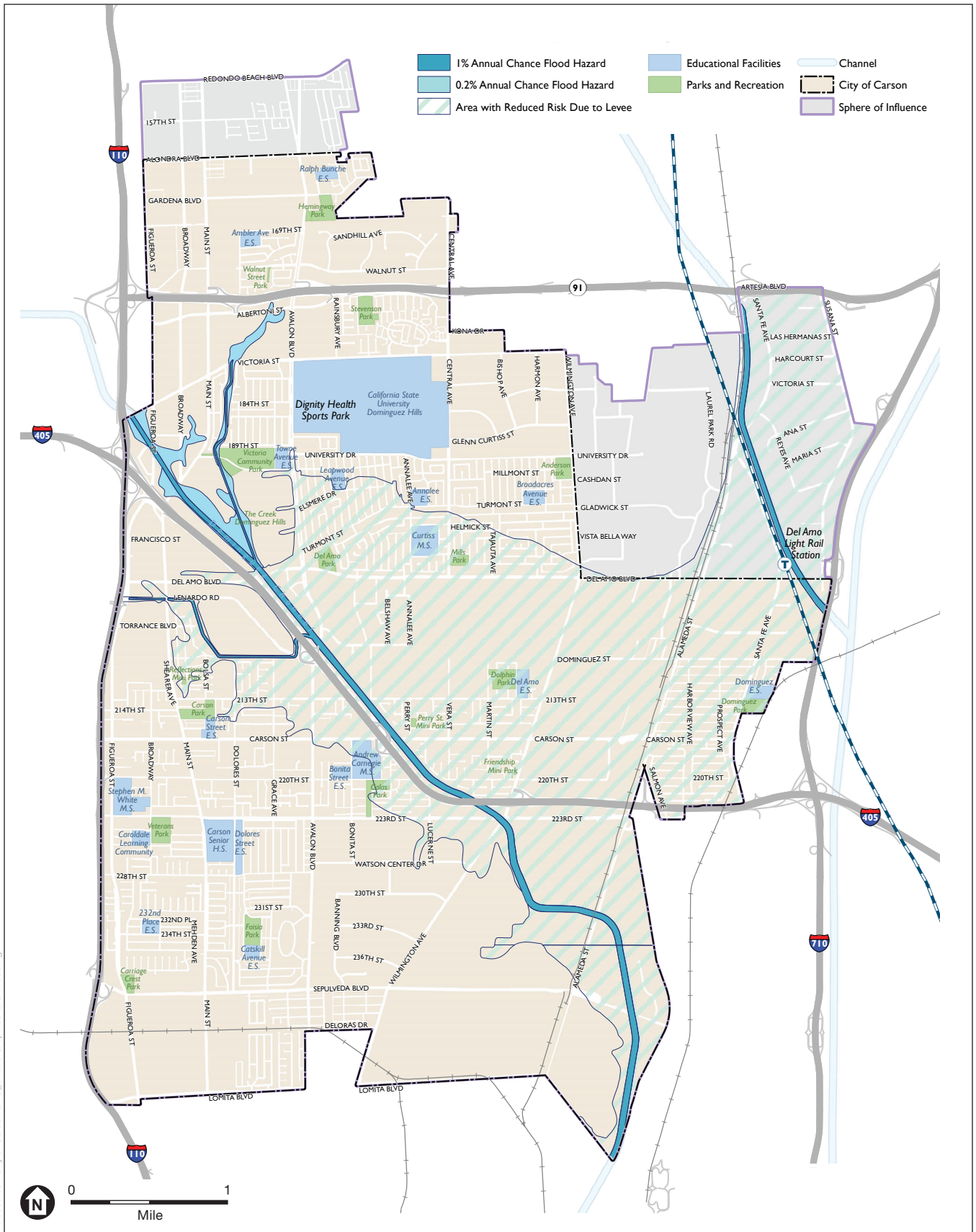
The city also has Special Flood Hazard Areas (SFHAs) which are subject to inundation by the 1 percent annual flood chance (100-year flood). The SFHAs within the city are Zoned A, no base flood elevations determined, and are located on either side of the Dominguez Channel, Torrance Lateral, Del Amo Channel, McKinley Avenue Drain, and Wilmington Drain and Compton Creek.²⁴

²¹ Water Replenishment District of Southern California, 2021. Regional Groundwater Monitoring Report Water Year 2019–2020. March.

²² Secondary maximum contaminant levels (SMCLs) are voluntary standards set by the USEPA for drinking water quality. SMCLs are established for constituents that impact the aesthetics of the water, such as taste, odor, and color, but do not impact health.

²³ Federal Emergency Management Agency, 2008. Flood Insurance Rate Map. Map Numbers 06037C1935F, 06037C1965F, 06037C1955F, 06037C1795F, and 06037C1965F. Available at: <http://fema.maps.arcgis.com/home/webmap/viewer.html?webmap=cbe088e7c8704464aa0fc34eb99e7f30&extent=-118.3526907300362,33.80927373190949,-118.18652251714582,33.856329500125554>, Accessed May 2021.

²⁴ Federal Emergency Management Agency, 2008. Flood Insurance Rate Map. Map Numbers 06037C1935F, 06037C1965F, 06037C1955F, 06037C1795F, and 06037C1965F. Available at <http://fema.maps.arcgis.com/home/webmap/viewer.html?webmap=cbe088e7c8704464aa0fc34eb99e7f30&extent=-118.3526907300362,33.80927373190949,-118.18652251714582,33.856329500125554>, Accessed December 2017.



SOURCE: FEMA, 2021; City of Carson, 2017; Los Angeles GIS Data Portal, 2017; Dyett & Bhatia, 2021

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Figure 3.9-1
Flood Hazard Map



Dam Inundation

Dam inundation areas are mapped by dam owners and submitted to the California Office of Emergency Services. According to the City of Carson's current General Plan, the city is not located in proximity to a dam and therefore, is not located in a dam inundation area.²⁵

Tsunami and Seiche Inundation

Seismically induced water waves include tsunamis, seiche, and waves generated by failure of retaining structures. A tsunami is a sea wave or series of sea waves caused by a sudden displacement of the ocean floor, most often due to earthquakes. The city is located approximately six miles inland from the Pacific Ocean and two miles inland from the Los Angeles/Long Beach Harbor area. Based on tsunami inundation maps prepared by the California Geological Survey, the city is not located in a tsunami inundation hazard area and thus, the potential for tsunami effects is considered negligible.²⁶

A seiche is a surface wave that oscillates in an enclosed water body, such as a reservoir, lake, or pond, due to earthquake motion. There are no enclosed large water bodies within the city and therefore, there is no potential for seiche effects within the city.

3.9.3 Regulatory Framework

This section provides the relevant federal, state, regional, and local regulations applicable to the Project.

Federal

Clean Water Act

The Clean Water Act (CWA) is the primary federal law that protects the quality of the nation's surface waters, including lakes, rivers, and coastal wetlands. It is based on the principle that all discharges into the nation's waters are unlawful unless specifically authorized by a permit. Permit review is the CWA's primary regulatory tool. A key component of the CWA is Section 402, which regulates point-source and nonpoint-source discharges to surface waters through the NPDES program. In California, the SWRCB oversees the NPDES program, which is administered by the RWQCBs. The NPDES program provides for both general permits (those that cover a number of similar or related activities) and individual permits. General permits in California designed for compliance with the NPDES program include the Construction General Permit and Industrial General Permit issued by the SWRCB, as well as Municipal Separate Storm Sewer System (MS4) permits issued by the RWQCBs. The Construction General Permit and the MS4 permits discussed below comply with Section 402.

The CWA also requires states to adopt water quality standards for receiving waters. Water quality standards designate beneficial uses for receiving waters (e.g., wildlife habitat, agricultural supply,

²⁵ City of Carson, 2004. City of Carson General Plan, Safety Element. Available at: https://ci.carson.ca.us/content/files/pdfs/planning/generalplan/Chapter%206_Safety.pdf, Accessed May 19, 2021.

²⁶ California Department of Conservation, 2015. Tsunami Inundation Maps. Available at: <http://maps.conservation.ca.gov/cgs/informationwarehouse/index.html?map=tsunami>, Accessed April 2021.

fishing), and include the criteria required to support those uses. Water quality criteria are either narrative statements related to the quality of the water that support a particular use or maximum concentration levels for pollutants (i.e., lead, suspended sediment, bacteria, etc.). As part of the CWA, when monitoring data indicate that a concentration level for a pollutant has been exceeded, the receiving water is classified as impaired and placed on the CWA Section 303(d) List of Water Quality–Limited Segments Requiring TMDLs (303[d] list). A TMDL is then developed for the pollutant(s) that caused the impairment. A TMDL is an estimate of the total load of pollutants from point, non-point, and natural sources that a water body may receive without exceeding applicable water quality standards (plus a “margin of safety”). The purpose of the TMDL is to limit the volume of pollutants discharged into the receiving water from all sources (i.e., Stormwater runoff, wastewater, agriculture).

Executive Order 11988

Executive Order 11988 directs federal agencies to avoid to the extent practicable and feasible short- and long-term adverse impacts associated with the occupancy and modifications of floodplains and to avoid direct and indirect support of floodplain development wherever there is a practicable alternative. Furthermore, this Executive Order requires the prevention of uneconomic, hazardous, or incompatible use of floodplains; protection and preservation of the natural and beneficial floodplain values; and consistency with the standards and criteria of the National Flood Insurance Program (NFIP).

Federal Highway Administration (FHA) regulations require that a local hydraulic study and risk assessment be performed where a planned facility or action would encroach on a base floodplain or support incompatible floodplain development. When the hydraulic study indicates significant encroachment, findings must be made that it is the only practicable alternative. The hydraulic study and risk assessment protocols are set forth in the Caltrans Highway Design Manual. This manual provides guidance and procedures whenever an encroachment permit is anticipated.

Federal Antidegradation Policy, 40 Code of Federal Regulations 131.12

The Federal Antidegradation Policy was released in 1968 and was included in the USEPA’s first Water Quality Standards Regulation. The Antidegradation Policy represents a three-tiered approach to maintaining and protecting water quality. First, all existing beneficial uses and levels of water quality necessary to protect those uses must be preserved and protected from degradation. Second, water quality must be protected in areas where the quality cannot support the propagation of fish, shellfish, and wildlife and recreation (“fishable/swimmable”). Third, the policy provides special protection of waters for which the ordinary water quality criteria are not sufficient. These waters are called “Outstanding National Resources Waters” and have been designated as unique or ecologically sensitive. If an activity is going to be allowed to degrade or lower water quality (in situations where existing water quality is higher than that needed to maintain established beneficial uses), the Antidegradation Policy requires that proposed projects meet the following criteria: (1) The activity is necessary to accommodate important economic or social development in the area; and (2) water quality is adequate to protect and fully maintain existing beneficial uses.

National Flood Insurance Program

The National Flood Insurance Act of 1968 established the National Flood Insurance Program, which is based on the minimal requirements for floodplain management and is designed to minimize flood damage within Special Flood Hazard Areas. FEMA is responsible for determining flood elevations and floodplain boundaries based on studies and surveys conducted by the U.S. Army Corps of Engineers (USACE). FEMA is also responsible for distributing the FIRMs used in the National Flood Insurance Program. These maps identify the locations of special flood hazard areas, including the 100-year floodplain. FEMA allows nonresidential development in the floodplain; however, construction activities are restricted within flood hazard areas, depending on the potential for flooding within each area. Federal regulations governing development in a floodplain are set forth in Title 44, Part 60 of the Code of Federal Regulations, enabling FEMA to require municipalities that participate in the National Flood Insurance Program to adopt certain flood hazard reduction standards for construction and development in 100-year floodplains.

National Pollutant Discharge Elimination System Program

The NPDES program was established per 1972 amendments to the Federal Water Pollution Control Act to control discharges of pollutants from point sources²⁷ (Section 402). The 1987 amendments to the CWA created a section devoted to Stormwater permitting (Section 402[p]), with individual states designated for administration and enforcement of the provisions of the CWA and the NPDES program. The NPDES permit program is administered in the State of California by the SWRCB and RWQCBs under the authority of the USEPA to control water pollution by regulating point sources that discharge pollutants into waters of the United States. If discharges from industrial, municipal, and other facilities go directly to surface waters, those project applicants must obtain NPDES permits. An individual NPDES permit is specifically tailored to a discharge to waters of the United States. A general NPDES permit covers multiple facilities within a specific activity category such as construction activities. A general permit applies with same or similar conditions to all dischargers covered under the general permit. The state Construction General Permit is discussed in the *State* subsection further below.

National Toxics Rule

In 1992, the USEPA promulgated the National Toxics Rule under the CWA to establish numeric criteria for priority toxic pollutants for 14 states to bring all states into compliance with the requirements of Section 303(c)(2)(B) of the CWA. The National Toxics Rule established water quality standards for 42 pollutants not covered under California's statewide water quality regulations at that time. As a result of the court ordered revocation of California's statewide Basin Plans in September 1994, USEPA initiated efforts to promulgate additional federal water quality standards for California. In May 2000, the USEPA issued the California Toxics Rule, which includes all the priority pollutants for which USEPA has issued numeric criteria not included in the National Toxics Rule. The California Toxics Rule is discussed in greater detail below under state laws.

²⁷ Point sources are discrete water conveyances such as pipes or human-made ditches.

Safe Drinking Water Act

The Safe Drinking Water Act (SDWA), administered by the USEPA in coordination with the states, is the main federal law that ensures the quality of drinking water. Under the SDWA, the USEPA sets standards for drinking water quality and oversees the states, localities, and water suppliers who implement those standards. The Department of Public Health administers the regulations contained in the SDWA in the State of California.

State

Porter-Cologne Water Quality Act

The Porter-Cologne Water Quality Control Act, also known as the California Water Code, is California's statutory authority for the protection of water quality. The Porter-Cologne Water Quality Act is promulgated in the California Code of Regulations Title 22. Under this act, the state must adopt water quality policies, plans, and objectives that protect the state's waters. The act sets forth the obligations of the SWRCB and RWQCBs pertaining to the adoption of Basin Plans and establishment of water quality objectives. Unlike the federal CWA, which regulates only surface water, the Porter-Cologne Water Quality Act regulates both surface water and groundwater. The Porter-Cologne Water Quality Act divided the state into nine regional basins, each with a RWQCB. The Project area is located within the jurisdiction of the Los Angeles RWQCB. The SWRCB is the primary state agency with responsibility to protect surface water and groundwater quality.

The Porter-Cologne Act authorizes the SWRCB to draft policies regarding water quality in accordance with CWA Section 303. In addition, the Porter-Cologne Act authorizes the SWRCB to issue waste discharge requirements (WDRs) for projects that would discharge to state waters. These requirements regulate discharges of waste to surface and groundwater, regulate waste disposal sites, and require cleanup of discharges of hazardous materials and other pollutants. The Porter-Cologne Act also establishes reporting requirements for unintended discharges of any hazardous substance, sewage, or oil or petroleum product.

The Porter-Cologne Act requires the SWRCB or the RWQCBs to adopt water quality control plans (Basin Plans) and policies for the protection of water quality. The Basin Plan must conform to the policies set forth in the Porter-Cologne Act and established by the SWRCB in its State Water Policy. The Basin Plan identifies beneficial uses for the water to be protected, establishes water quality objectives for the reasonable protection of the beneficial uses, and establishes an implementation program for achieving the water quality objectives. Basin plans also provide the technical basis for determining WDRs, taking enforcement actions, and evaluating clean water grant proposals. Basin plans are updated and reviewed every 3 years in accordance with Article 3 of Porter-Cologne and CWA Section 303(c).

California Toxics Rule

The California Toxics Rule (40 CFR 131.38) is a USEPA-issued federal regulation that provides water quality criteria for potentially toxic constituents in California surface waters with designated uses related to human health or aquatic life. The rule fills a gap in California water quality standards that was created in 1994 when a state court overturned the state's water quality

control plans containing water quality criteria for priority toxic pollutants. These federal criteria are legally applicable in the State of California for inland surface waters, enclosed bays, and estuaries for all purposes and programs under the CWA. The California Toxics Rule establishes two types of aquatic life criteria: (1) Acute criteria represent the highest concentration of a pollutant to which aquatic life can be exposed for a short period of time without harmful effects;²⁸ and (2) Chronic criteria equal the highest concentration to which aquatic life can be exposed for an extended period of time (four days) without deleterious effects. Due to the intermittent nature of stormwater runoff, especially in Southern California, the acute criteria are considered to be more applicable to stormwater conditions than chronic criteria.

State Antidegradation Policy

Under the State's Antidegradation Policy as set forth in SWRCB Resolution No. 68-16, whenever the existing quality of waters is better than what is needed to protect present and future beneficial uses, such existing quality must be maintained. This state policy has been adopted as a water quality objective in all the state's Basin Plans. The state policy establishes a two-step process to determine if discharges with the potential to degrade the water quality of surface or groundwater will be allowed. The first step requires that, where a discharge would degrade high-quality water, the discharge may be allowed only if any change in water quality would be consistent with the maximum benefit to the people of the state, not reasonably affect present and anticipated beneficial uses of such water, or result in water quality that is not less than that which is prescribed in state policies (i.e., Basin Plans). The second step (as set forth in SWRCB Resolution No. 68-16) states that any activity resulting in discharge to high-quality waters is required to use the best practicable treatment or control of the discharge necessary in order to avoid the occurrence of pollution or nuisance and to maintain the "highest water quality consistent with the maximum benefit to the people of the state". The state policy applies to both surface and groundwater, as well as to both existing and potential beneficial uses of the applicable waters.

Construction General Permit

The Construction General Permit regulates discharges of pollutants in stormwater associated with construction activity to waters of the United States from construction sites that disturb 1 or more acres of land surface, or that are part of a common plan of development or sale that disturbs more than 1 acre of land surface. The permit regulates stormwater discharges associated with construction or demolition activities, such as clearing and excavation; construction of buildings; and linear underground projects, including installation of water pipelines and other utility lines.

The Construction General Permit requires that construction sites be assigned a Risk Level of 1 (low), 2 (medium), or 3 (high), based both on the sediment transport risk at the site and the receiving waters risk during periods of soil exposure (e.g., grading and site stabilization). The sediment risk level reflects the relative amount of sediment that could potentially be discharged to receiving water bodies and is based on the nature of the construction activities and the location of the site relative to receiving water bodies. The receiving waters risk level reflects the risk to the

²⁸ The rule does not specify timeframe for "acute." Standard practice would likely imply that any condition that is permanent or semi-permanent is chronic; all else would be short-term.

receiving waters from the sediment discharge. Depending on the risk level, the construction projects could be subject to the following requirements:

- Effluent standards
- Good site management “housekeeping”
- Non-stormwater management
- Erosion and sediment controls
- Run-on and runoff controls
- Inspection, maintenance, and repair
- Monitoring and reporting requirements

The Construction General Permit requires the development and implementation of a Stormwater Pollution Prevention Plan (SWPPP) that includes specific best management practices (BMPs) designed to prevent sediment and pollutants from contacting stormwater from moving off site into receiving waters. The BMPs fall into several categories, including erosion control, sediment control, waste management, and good housekeeping, and are intended to protect surface water quality by preventing the off-site migration of eroded soil and construction-related pollutants from the construction area. Routine inspection of all BMPs is required under the provisions of the Construction General Permit. In addition, the SWPPP is required to contain a visual monitoring program, a chemical monitoring program for non-visible pollutants, and a sediment monitoring plan if the site discharges directly to a water body listed on the 303(d) list for sediment.

The SWPPP must be prepared before the construction begins and must contain a site map that delineates the construction work area, existing and proposed buildings, parcel boundaries, roadways, stormwater collection and discharge points, general topography both before and after construction, and drainage patterns across the Project area. The SWPPP must list the type and placement of those BMPs that the applicant would use to protect stormwater runoff. Examples of typical construction BMPs include scheduling or limiting certain activities to dry periods, installing sediment barriers such as silt fence and fiber rolls, and maintaining equipment and vehicles used for construction. Non-stormwater management measures include installing specific discharge controls during certain activities, such as paving operations, vehicle and equipment washing and fueling. The Construction General Permit also sets post-construction standards (i.e., implementation of BMPs to reduce pollutants in stormwater discharges from the site following construction).

In the Project area, the Construction General Permit is implemented and enforced by the Los Angeles RWQCB (Region 4), which administers the stormwater permitting program. Dischargers are required to electronically submit a notice of intent (NOI) and permit registration documents (PRDs) in order to obtain coverage under this Construction General Permit. Dischargers are responsible for notifying the RWQCB of violations or incidents of non-compliance, as well as for submitting annual reports identifying deficiencies of the BMPs and how the deficiencies were corrected. The risk assessment and SWPPP must be prepared by a state Qualified SWPPP Developer and implementation of the SWPPP must be overseen by a state Qualified SWPPP Practitioner. A Legally Responsible Person, who is legally authorized to sign and certify PRDs, is responsible for obtaining coverage under the permit.

Sustainable Groundwater Management Act

In September 2014, Governor Brown signed into law the Sustainable Groundwater Management Act (SGMA), which provides a framework to regulate groundwater and strengthen local groundwater management of basins most critical to the state’s water needs. SGMA requires basins to be sustainably managed by local public agencies (e.g., counties, cities, and water agencies) who become groundwater sustainability agencies (GSAs). GSAs must assess conditions in their local water basins and adopt locally-based management plans to achieve long-term groundwater sustainability over the next 20 years. It protects existing surface water and groundwater rights and does not impact current drought response measures. The SGMA became effective January 1, 2015.

High- and medium-priority basins are required to develop Groundwater Sustainability Plans (GSPs) to be submitted to the California Department of Water Resources’ (DWR) SGMA Portal. Adjudicated basins are not required to prepare GSPs, but are required to submit annual basin reports to fulfill SGMA requirements. The most recent annual report submitted by the Central Basin and West Coast Basin are for the 2019–2020 reporting year.²⁹ The reports list total annual groundwater and surface water used for the reporting year.

Regional

Greater Los Angeles County Region Integrated Regional Water Management Plan

The Greater Los Angeles County Region Integrated Regional Water Management Plan (GLACR IRWMP) was most recently updated in 2014. The IRWMP is a regional plan designed to improve collaboration in water resources management. The first IRWMP for GLACR IRWMP was published in 2006 following a multi-year effort among water retailers, wastewater agencies, stormwater and flood managers, watershed groups, the business community, tribes, agriculture, and non-profit stakeholders to improve water resources planning in the Los Angeles Basin. It provides a mechanism for: (1) coordinating, refining, and integrating existing planning efforts within a comprehensive, regional context; (2) identifying specific regional and watershed-based priorities for implementation projects; and (3) providing funding support for the plans, programs, projects, and priorities of existing agencies and stakeholders.

Los Angeles County Low-Impact Development Ordinance

In December 2012, the Los Angeles County Board of Supervisors updated the County Low Impact Development (LID) Ordinance (Chapter 12.84 of the County Code [LACC]) for compliance with the 2012 Los Angeles RWQCB MS4 Permit. The updated LID Ordinance requires the integration into project design an array of feasible design features and operational practices for the retention, detention, storage, and filtration of stormwater and urban runoff, prior to discharge off-site. LID generally relies on an integrated system of decentralized, small-scale control measures that can be implemented at a project site, using structural devices, engineered

²⁹ California Department of Water Resources, 2021. Adjudicated Area Annual Reports. Available at: <https://sgma.water.ca.gov/adjudbasins/report/publicview>, Accessed September 2021

systems, vegetated natural designs, and other techniques to control stormwater and urban runoff on-site and not solely through off-site conveyance or at an off-site collection point.

Los Angeles County Municipal Separate Storm Sewer System Permit

As part of its NPDES program, the Los Angeles RWQCB adopted a new MS4 Permit in 2012. MS4 Permits were issued statewide in two phases. Phase I was initiated in 1990, under which the RWQCBs adopted NPDES MS4 Permits for medium (between 100,000 and 250,000 people) and large (more than 250,000 people) municipalities. As part of Phase II, the SWRCB adopted a General Permit for small MS4s (less than 100,000 people) and non-traditional small MS4s including governmental facilities such as military bases, public campuses, and prison and hospital complexes (WQ Order No. 2003-0005-DWQ).

The Los Angeles RWQCB's 2012 MS4 Permit named 84 incorporated cities, Los Angeles County, and the Los Angeles County Flood Control District as permittees.³⁰ The 2012 MS4 Permit imposes a number of basic programs, called Minimum Control Measures, on all permittees in order to maintain a level of acceptable runoff conditions through the implementation of practices, devices, or designs, generally referred to as BMPs, that mitigate stormwater quality problems. As an example, the development construction program requires the implementation of temporary BMPs during a project's construction phase to protect water resources by preventing erosion, controlling runoff, protecting natural slopes and channels, storing fluids safely, managing spills quickly, and conserving natural areas.

Los Angeles Region Basin – Region 4, Water Quality Control Plan

As required by the California Water Code, the Los Angeles RWQCB has adopted the "Water Quality Control Plan, Los Angeles Region: Basin Plan for the Coastal Watersheds of Los Angeles and Ventura Counties" (LA Basin Plan). Specifically, the LA Basin Plan designates beneficial uses for surface water and groundwater, sets narrative and numerical objectives that must be attained or maintained to protect the designated beneficial uses and conform to the state's Antidegradation policy, and describes implementation programs to protect all waters in the Los Angeles region. In addition, the LA Basin Plan incorporates (by reference) all applicable state and regional board plans and policies and other pertinent water quality policies and regulations. Those of other agencies are referenced in appropriate sections throughout the LA Basin Plan.³¹

³⁰ California Regional Water Quality Control Board, 2015. California Regional Water Quality Control Board Los Angeles Region Order No. R4-2012-0175 as amended by State Water Board Order WQ 2015-0075 NPDES Permit No. CAS00r4001. Available at: https://www.waterboards.ca.gov/losangeles/water_issues/programs/stormwater/municipal/la_ms4/2015/OrderR4-2012-0175-FinalOrderasamendedbyOrderWQ2015-0075.pdf, Accessed April 2021.

³¹ California Regional Water Quality Control Board, 1994. Water Quality Control Plan: Los Angeles Region Basin Plan for the Coastal Watersheds of Los Angeles and Ventura Counties, adopted June 13, 1994. http://www.waterboards.ca.gov/losangeles/water_issues/programs/basin_plan/, Accessed April 2021.

Local

City of Carson Municipal Code

The following provisions in the Carson Municipal Code are relevant to hydrology and water quality issues.

Article III, Public Safety, Chapter 6, Watercourses, details requirements relating to the interference with natural watercourses:

- It shall be unlawful for any person, firm, corporation, municipality or district to place or cause to be placed in the channel or bed or bank of any river, stream, wash or arroyo in the City of Carson, any wires, fence, building or other structure, or any refuse, rubbish, tin cans or other matter that may impede, retard or change the normal direction of the flow of the flood, storm or other waters in such river, stream, wash or arroyo, or that may catch or collect debris carried by such waters to the damage and detriment of either private or public property within or adjacent to said river, stream, wash or arroyo, nor shall any material, either solid or liquid, be placed in said river, stream, wash or arroyo that will deteriorate the quality of water flowing or stored therein or that which is stored within the water bearing zones underground. (Ord. 74-310, § 1)

Article V, Sanitation and Health, Chapter 8, Storm Water and Urban Runoff Pollution Controls, details requirements:

- To ensure the future health, safety and general welfare of the citizens of the City and the water quality of the receiving waters of the County of Los Angeles and surrounding coastal areas by:
 1. Reducing pollutants in storm water discharges to the maximum extent practicable;
 2. Regulating illicit connections and illicit discharges and thereby reducing the level of contamination of storm water and urban runoff into the Municipal Separate Storm Sewer System; and
 3. Regulating Nonstorm Water Discharges to the Municipal Separate Storm Sewer System.
- To protect and enhance the quality of watercourses, water bodies, and wetlands within the City in a manner consistent with the Federal Clean Water Act, the California Porter-Cologne Water Quality Control Act and the Municipal NPDES Permit.
- To provide the City with the legal authority necessary to control discharges to and from those portions of the Municipal Separate Storm Sewer System over which it has jurisdiction as required by the Municipal NPDES Permit, and thereby fully and timely comply with the terms of the Municipal NPDES Permit while the Countywide Storm Water Management Plan (CSWMP) and the Watershed Management Area Plan (WMAP) are being developed by the Permittees under the Municipal NPDES Permit, and in contemplation of the subsequent amendment of this Chapter or adoption by the City of additional provisions of this Chapter to implement the subsequently adopted CSWMP and WMAP, or other programs developed under the Municipal NPDES Permit.
- To set forth requirements for the construction and operation of certain “commercial development,” “new development” and “redevelopment” and other projects (as further defined herein) which are intended to ensure compliance with the storm water mitigation measures prescribed in the current version of the Standard Urban Storm Water Mitigation

Plan (SUSMP) approved by the Los Angeles RWQCB, and on file in the office of the City Clerk of this City. This Chapter authorizes the authorized enforcement officer to define and adopt applicable Best Management Practices and other storm water pollution control measures, to grant waivers from SUSMP requirements, as provided herein, to cite infractions and to impose fines pursuant to this Chapter. Except as otherwise provided herein, the authorized enforcement officer shall administer, implement and enforce the provisions of this Section. (Ord. 96-1101, § 1; Ord. 01-1221U, § 1)

Article VIII, Building Regulations – Sewage and Waste, Chapter 1, Building Code, adopts the Title 26, Building Code, of the Los Angeles County Code, as amended and in effect on January 1, 2017.

- The City of Carson adopted the California Building Code, 2016 Edition (Part 2 of Title 24 of the California Code of Regulations), is hereby adopted by reference, and shall be known and may be cited as the Building Code of the City of Carson. (Ord. 95-1080U, § 1; Ord. 99-1162, § 1; Ord. 02-1262U, § 1; Ord. 02-1262, § 1; Ord. 08-1411, § 1; Ord. 11-1464U, § 1; Ord. 14-1532U, § 1; Ord. 14-1532, § 1; Ord. 17-1611U, § 1; Ord. 17-1611, § 1)

Article VIII, Building Regulations – Sewage and Waste, Chapter 5, Sewage and Industrial Waste, adopts Title 20, Utilities, Division 2, Sanitary Sewers and Industrial Waste, of the Los Angeles County Code as amended and in effect on January 2, 1990.

- The City of Carson adopted by reference as the Sanitary Sewer and Industrial Waste Ordinance of the City of Carson. (Ord. 2, § 8400; Ord. 29, § 8400; Ord. 38; Ord. 71-180, § 1; Ord. 78-455, § 1; Ord. 90-901, § 1)

Article VIII, Building Regulations – Sewage and Waste, Chapter 6, Floodplain Management, details requirements:

- To promote the public health, safety, and general welfare, and to minimize public and private losses due to flood conditions in specific areas by provisions designed to:
 1. Protect human life and health;
 2. Minimize expenditure of public money for costly flood control projects;
 3. Minimize the need for rescue and relief efforts associated with flooding and generally undertaken at the expense of the general public;
 4. Minimize prolonged business interruptions;
 5. Minimize damage to public facilities and utilities such as water and gas mains; electric, telephone and sewer lines; and streets and bridges located in areas of special flood hazard;
 6. Help maintain a stable tax base by providing for the sound use and development of areas of special flood hazard so as to minimize future blighted areas caused by flood damage;
 7. Ensure that potential buyers are notified that property is in an area of special flood hazard; and
 8. Ensure that those who occupy the areas of special flood hazard assume responsibility for their actions. (Ord. 06-1351, § 1)

3.9.4 Project Impact Analysis

Thresholds of Significance and Methodology

Thresholds of Significance

Appendix G of the State CEQA Guidelines provides screening questions that address potential impacts related to a number of environmental issues. The CEQA guidelines provides that lead agencies may use the questions set forth in the Appendix G to assess the significance of a project's environmental effects, and the use of Appendix G as a significance threshold is routinely sanctioned by the courts (although such use is not mandatory). Based on the Appendix G questions regarding hydrology and water quality, a project would have a significant impact if the project would:

- Threshold HYD-1:** Violate any water quality standards or waste discharge requirements or otherwise substantially degrade water quality;
- Threshold HYD-2:** Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin;
- Threshold HYD-3:** 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:
- i. Result in substantial erosion or siltation on- or off-site;
 - ii. Substantially increase the create or amount of surface runoff in a manner which would result in flooding on- or offsite;
 - iii. Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems of provide substantial additional sources of polluted runoff;
 - iv. Impede or redirect flood flows;
- Threshold HYD-4:** In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation; or
- Threshold HYD-5:** Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan.

Methodology

Potential impacts on surface and groundwater quality and the potential risk of flooding resulting from anticipated development under the proposed General Plan update were evaluated based on relevant information from FEMA, Los Angeles County, and the City of Carson. Programmatic impacts are discussed in broad, qualitative terms. This assessment does not satisfy the need for project-level CEQA analysis for individual projects.

Projects implemented under the proposed General Plan update would be regulated by the various laws, regulations, and policies summarized in Section 3.9.3, *Regulatory Framework*. Compliance by projects with applicable federal, state, and local laws and regulations is assumed in this analysis and local and state agencies would be expected to continue to enforce applicable requirements to the extent that they do so now. Note that compliance with many of the regulations is a condition of permit approval.

Project Impact Analysis

Violate Water Quality Standards or Waste Discharge Requirements

Threshold HYD-1: The Project would have a significant impact if future development allowed by Carson2040 would violate any water quality standards or waste discharge requirements or otherwise substantially degrade water quality.

Impact HYD-1: *The Project would not violate any water quality standards or waste discharge requirements or otherwise substantially degrade water quality. (Less than Significant)*

A community's impact on water quality is closely related to the hydrologic context of a region and the sources and types of pollutants that can further degrade or impair the area's water resources. As additional development occurs in the city, impervious surfaces may increase due to the creation or expansion of roads, parking lots, buildings, and other infrastructure. Impervious surfaces generate higher runoff volumes than pervious surfaces. In addition, impervious surfaces collect urban pollutants that can be mobilized during a rain fall event. Thus, increasing impervious surfaces may also increase the amount of urban pollution in storm water runoff (e.g., sediment, fertilizers, bacteria, metal, trash, etc.). These negative water quality impacts can be mitigated through various storm water best management practices.

Other sources of water quality impacts include direct discharge associated with industrial/commercial activities, automobiles, agriculture, and herbicides. Pollutant sources may be generated by past waste disposal practices and chemicals and fertilizers applied to landscaping. Contaminants may include sediment, PCBs, mercury, fuels and oils, metals, pesticides, nutrients, bacteria, and trash.

The proposed General Plan update would have a significant environmental impact if it would result in the violation of water quality standards and waste discharge requirements set out in Municipal Permit Order No. R4-2012-0175, NPDES Permit CAS004001, issued by the Los Angeles RWQCB. Violation of these permits could occur if the development anticipated in the proposed General Plan update would substantially increase pollutant loading levels in the sanitary sewer system or in groundwater underlying the city, either directly through the introduction of pollutants generated by industrial land uses, or indirectly through stormwater pollution. As NPDES Permit CAS004001 is based on the federal Clean Water Act, compliance with the Porter-Cologne Water Quality Control Act (Division 7 of the Water Code, commencing with Section 13000), applicable federal and state regulations, all applicable provisions of statewide water quality control plans and policies adopted by the SWRCB, the Basin Plan adopted by the RWQCB, the California Toxics Rule, the California

Toxics Rule Implementation Plan, and NPDES would ensure compliance with other applicable plans and regulations pertaining to water quality.

While the city is largely built out, potential development and redevelopment under the proposed General Plan update could increase the area of impervious surfaces within the city and thus could increase the amount of runoff and associated pollutants during both construction and operation. However, as described in Section 3.9.3, *Regulatory Framework*, all construction activity within the city that has the potential to negatively affect water quality is required to comply with the MS4 Permit. In addition, the City's Runoff Pollution Control Ordinances would further protect water quality in the city.

Implementation of practices required by the MS4 Permit and local ordinances would reduce the volume of runoff from impervious surfaces and increase the amount of natural filtration of pollutants from stormwater occurring on site, generally improving the quality of stormwater before it enters the city's and/or county's stormwater system.

Finally, the proposed General Plan update contains policies that require the City of Carson to support RWQCB regulations and standards, ensure that individual developments incorporate BMPs, prepare and implement applicable water quality plans, coordinate with federal, state, and local agencies to monitor industrial discharges, adopt a master plan for the Dominguez Channel to improve water quality, and, where feasible, support the restoration and rehabilitation of channelized waterways and promote naturalized drainage channels. Overall, the proposed General Plan's policies would promote improved water quality in the city and continued compliance with federal, state, and local water quality regulations, and would ensure that water quality is protected to the maximum extent practicable.

For the reasons stated above, the proposed General Plan update would not violate any water quality standards or waste discharge requirements or otherwise substantially degrade water quality, and this impact is considered less than significant.

Proposed General Plan Policies that Address the Impact

Open Space and Environmental Conservation

Guiding Policies

OSEC-G-9 Maintain the quality of surface water and groundwater resources and prevent their contamination

Implementing Policies

OSEC-P-14 Support Los Angeles Regional Water Quality Control Board (RWQCB) regulations and standards to maintain and improve the quality of both surface water and groundwater resources.

OSEC-P-15 Continue working with the Los Angeles RWQCB in implementation of the National Pollutant Discharge Elimination System (NPDES) program. As part of the NPDES permitting process, require developments to incorporate structural and non-structural best management practices (BMPs) to mitigate or reduce the projected increases in pollutant loads. Do not allow post-development runoff from a site that would cause or contribute to an exceedance

of receiving water quality objectives or has not been reduced to the maximum extent practicable.

- OSEC-P-16 Prepare and implement applicable plans such as a Water Quality Improvement Plan, Integrated Regional Water Management Plan, Load Reduction Plan or others as needed to comply with applicable regulations.
- OSEC-P-17 Coordinate with the U.S. EPA, CalEPA, LA RWQCB, and other related jurisdictions on monitoring industrial discharges to ensure that wastewater quality continues to meet various federal, state, and regional standards.
- OSEC-P-18 Establish and implement best management practices in the Carson Addendum to Dominguez Channel Watershed Management Area Group for protection of surface and groundwater quality. Review and update as needed.
- OSEC-P-19 Strive to adopt a Master Plan for the Dominguez Channel through partnerships with the Los Angeles County Flood Control District to improve the water quality and create an amenity for the community.
- OSEC-P-20 Where feasible, support the restoration and rehabilitation opportunities of channelized waterways and promote the usage of naturalized drainage channels within the city.
- OSEC-P-21 Coordinate the needs of pollution management with the overlapping (and sometimes competing) habitat management, flood management, capital improvement projects, development, aesthetic, and other open space needs.
- OSEC-P-22 Prepare and disseminate information about the potentially harmful effects of toxic chemical substances in the water supply and safe alternative measures, including information about safe alternatives to toxics for home and garden use.

Mitigation Measures

None required.

Deplete Groundwater Supplies or Interfere with Groundwater Recharge

Threshold HYD-2: The Project would have a significant impact if future development allowed by Carson2040 would substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level.

Impact HYD-2: *The Project would not substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level. (Less than Significant)*

As discussed in Section 3.17, *Utilities and Service Systems*, of this Draft EIR, a small portion of the city's potable water supply relies on groundwater. However, as discussed above in Section 3.9.3, *Regulatory Framework*, the groundwater basins serving the city are adjudicated, and thus have limits on the amount of groundwater that is pumped for potable use. Therefore, the potential

for overdraft is limited. With respect to groundwater recharge, as the city is largely built out and primarily consists of impervious surfaces, implementation of the proposed General Plan update would not result in substantial increases of impervious surfaces such that groundwater recharge would be hindered. Additionally, as discussed above, groundwater recharge basins for the Central Basin are in the Rio Hondo and San Gabriel Coastal Spreading Grounds along the Rio Hondo and the San Gabriel Rivers, and groundwater recharge for the West Coast Basin is primarily done through injection wells. Therefore, replenishment of groundwater is not reliant on natural recharge or percolation within the city. For these reasons, the impact of the proposed General Plan update with respect to the depletion of groundwater supplies or interference with groundwater recharge would be less than significant.

Proposed General Plan Policies that Address the Impact

There are no applicable proposed guiding and implementing policies that relate to a depletion in groundwater supplies or interference with groundwater recharge.

Mitigation Measures

None required.

Substantially Alter Drainage Patterns

Threshold HYD-3: The Project would have a significant impact if future development allowed by Carson2040 would 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: (i) result in substantial erosion or siltation on- or off-site; (ii) substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or offsite (iii) 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; (iv.) impede or redirect flood flows.

Impact HYD-3: *The Project would not substantially alter the existing drainage pattern of the site or area in a manner that would result in substantial erosion or siltation on- or off-site; substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or offsite; create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff; and impede or redirect flood flows. (Less than Significant)*

Implementation of the proposed General Plan update would not involve the direct alteration of existing streams, rivers, or other drainage patterns. However, potential future development or redevelopment allowed under the proposed General Plan update could impact the existing drainage system. While the city is largely built out, potential development and redevelopment under the proposed General Plan update could increase the area of impervious surfaces within the city and thus could increase runoff from these sites into the local storm drains in the city. This increase in runoff volumes could in turn result in hydromodification effects—such as erosion, siltation, and flooding—on the hydrological systems within the city, which occur when rainfall runoff is increased from impervious areas above the natural rainfall rate that would otherwise occur.

The City recognizes the importance of water quality and preventing hydromodification. As described in Section 3.9.3, *Regulatory Framework*, any development that would occur under the proposed General Plan update would be subject to the City’s Floodplain Management and Stormwater and Urban Runoff Pollution Control Ordinances that help prevent flood damage resulting from hydromodification. Adherence to the City’s ordinances would limit surface runoff from development under the proposed General Plan update, reducing siltation and erosion. In addition, the proposed General Plan update includes policies that seek to reduce localized flooding and ensure that areas experiencing localized flooding problems are targeted for storm drain improvements. For these reasons, the impact of the proposed General Plan update with respect to the alteration of drainage patterns would be less than significant.

Proposed General Plan Policies that Address the Impact

Implementing Policies CSES-P-21 and CSES-P-22 as discussed under Impact HYD-1, in addition to the following:

Community Services Education and Safety

Guiding Policies

CSES-G-12 Strive to minimize injury and loss of life, damage to public and private property and infrastructure, and economic and social disruption caused by flood hazards.

CSES-G-13 Incorporate strategies to reduce flooding impacts caused by urban runoff.

Implementing Policies

CSES-P-23 Ensure that areas experiencing localized flooding problems are targeted for storm drain improvements. To this end, work closely with Los Angeles County Department of Public Works and other cities in the South Bay region to ensure that facilities are adequate to accommodate storm waters.

CSES-P-24 Utilize open space to mitigate flood impacts and preserve as open space areas that cannot be mitigated for flood hazard.

Mitigation Measures

None required.

Flood Hazard, Tsunami, or Seiche

Threshold HYD-4: The Project would have a significant impact if future development allowed by Carson2040 would risk release of pollutants due to project inundation, if within a flood hazard, tsunami, or seiche zone.

Impact HYD-4: *The Project would not risk release of pollutants due to project inundation. (Less than Significant)*

The city is located approximately six miles inland from the Pacific Ocean and two miles inland from the Los Angeles/Long Beach Harbor area. As discussed in Section 3.9.2, *Environmental Setting*, the city is not located in a tsunami inundation hazard area and there are no enclosed large water bodies within the city with potential for seiche effects or waves generated by failure of

retaining structures.³² In addition, a vast majority of the city is outside of the flood hazard zone. Finally, development anticipated in the proposed General Plan update would comply with the City's existing regulations pertaining to flooding hazards and adhere to previously described proposed General Plan policies addressing flooding. Therefore, the impact of the proposed General Plan update with respect to flood hazard zones would be less than significant.

Proposed General Plan Policies that Address the Impact

Guiding Policies CSES-G-12 and CSES-G-13, and Implementing Policies CSES-P-21, CSES-P-22, CSES-P-23, and CSES-P-24, as discussed under Impact HYD-3.

Mitigation Measures

None required.

Conflict with a Water Quality Control Plan or Sustainable Groundwater Management Plan

Threshold HYD-5: The Project would have a potentially significant impact if future development allowed by Carson2040 would conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan.

Impact HYD-5: *The Project would not conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan. (Less than Significant)*

As described under Threshold HYD-1, the development anticipated by the proposed General Plan update could potentially degrade water quality; however, development would be subject to the RWQCB requirements and the Carson Municipal Code. Furthermore, the proposed General Plan update contains policies pertaining to water quality, as described previously. Overall, the proposed General Plan's policies would promote improved water quality in the city and continued compliance with federal, state, and local water quality regulations, and would ensure that water quality is protected to the maximum extent practicable. As discussed in Section 3.9.3, *Regulatory Framework*, adjudicated basins are not required to prepare GSPs, but are required to submit annual basin reports to fulfill SGMA requirements. As a result, no GSP has been prepared for either the West Coast or Central Basins. Therefore, the impact of the proposed General Plan update with respect to a conflict with a water quality control plan or a GSP would be less than significant.

Proposed General Plan Policies that Address the Impact

Guiding Policy OSEC-G-9 and Implementing Policies OSEC-P-14, OSEC-P-15, OSEC-P-16, OSEC-P-17, OSEC-P-18, OSEC-P-19, OSEC-P-20, OSEC-P-21, and OSEC-P-22 as discussed under Impact HYD-1.

³² California Department of Conservation, 2015. Tsunami Inundation Maps. Available at: <http://maps.conservation.ca.gov/cgs/informationwarehouse/index.html?map=tsunami>, Accessed April 2021.

Mitigation Measures

None required.

3.9.5 Cumulative Impact Analysis

Water Quality

The geographic context for the analysis of cumulative impacts associated with water quality is the area covered by the Dominguez Watershed. All future development in the watershed, including growth anticipated under the proposed General Plan update, would be subject to the requirements of the NPDES program and other regulations such as pollution control ordinances. Adherence to these regulations would minimize degradation of water quality associated with the construction and operation of individual projects. As such, the cumulative impact with respect to water quality would be considered less than significant.

Groundwater

The geographic context for the analysis of cumulative impacts associated with groundwater is the area underlain by the West Coast and Central basins. Both basins are adjudicated, and thus have limits on the amount of groundwater that is pumped for potable use. Therefore, the potential for overdraft is limited. With respect to groundwater recharge, the area over these basins is heavily urbanized and primarily built out with impervious surfaces. Therefore, future development over the West Coast and Central basins, including growth anticipated under the proposed General Plan update, would not result in substantial increases of impervious surfaces such that groundwater recharge would be hindered. In addition, the groundwater recharge basins for the Central Basin are in the Rio Hondo and San Gabriel Coastal Spreading Grounds along the Rio Hondo and the San Gabriel Rivers and groundwater recharge for the West Coast Basin is primarily done through injection wells. Thus, replenishment of groundwater is not reliant on natural recharge or percolation within the area. For these reasons, the cumulative impact with respect to depletion of groundwater supplies and groundwater recharge would be considered less than significant.

Storm Drainage

The existing storm drain system in the city is currently owned and operated by the City, while the LACPWD is responsible for all regional drainage facilities within the County. Since local storm drain facilities within the city ultimately flow into the County facilities, the geographic context for cumulative impacts is the South Bay region of southern Los Angeles County. As the area is heavily urbanized, future development would not involve the direct alteration of existing streams, rivers, or other drainage patterns. However, potential future development in the South Bay region, including growth anticipated under the proposed General Plan update, could impact the existing drainage system. Future development in the area would be subject to floodplain management and stormwater and urban runoff pollution control ordinances for each jurisdiction that would prevent flood damage resulting from hydromodification. Adherence to these ordinances would also limit surface runoff from future development, thus reducing siltation and erosion. For these reasons, the cumulative impact with respect to storm drainage would be considered less than significant.

Flood Hazards

The geographic context for the analysis of cumulative impacts associated with flooding hazards is the area served by the Dominguez Channel. Cumulative growth and development throughout the area has resulted in the introduction of new structures and impervious surfaces that increased stormwater runoff, leading to increased flood hazards. Future development in the area, including growth anticipated under the proposed General Plan update, would be subject to floodplain management and stormwater and urban runoff pollution control ordinances for each jurisdiction that would prevent flooding. For these reasons, the cumulative impact with respect to flooding would be considered less than significant.

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3.10 Land Use and Planning

3.10.1 Introduction

This section provides an analysis of potential environmental impacts from future development allowed under the Project, including those associated with the Project's consistency with existing land use plans and regulations. This section describes existing land uses as well as relevant state and local regulations and programs. Population and growth inducement are evaluated in Section 3.12, *Population and Housing*, of this Draft EIR.

Comments received in response to the Notice of Preparation (NOP) and Recirculated NOP regarding topics covered in this section include the following:

- The Southwest Regional Council of Carpenters (SWRCC) voiced concerns about land use planning and potential impacts of development projects. The comments suggest that the planning process should require applicants to include additional community benefits such as hiring local skilled and trained workers, enforcing current state and Los Angeles County standards of the Green Building Standards Codes, and providing public health protection measures at construction sites.

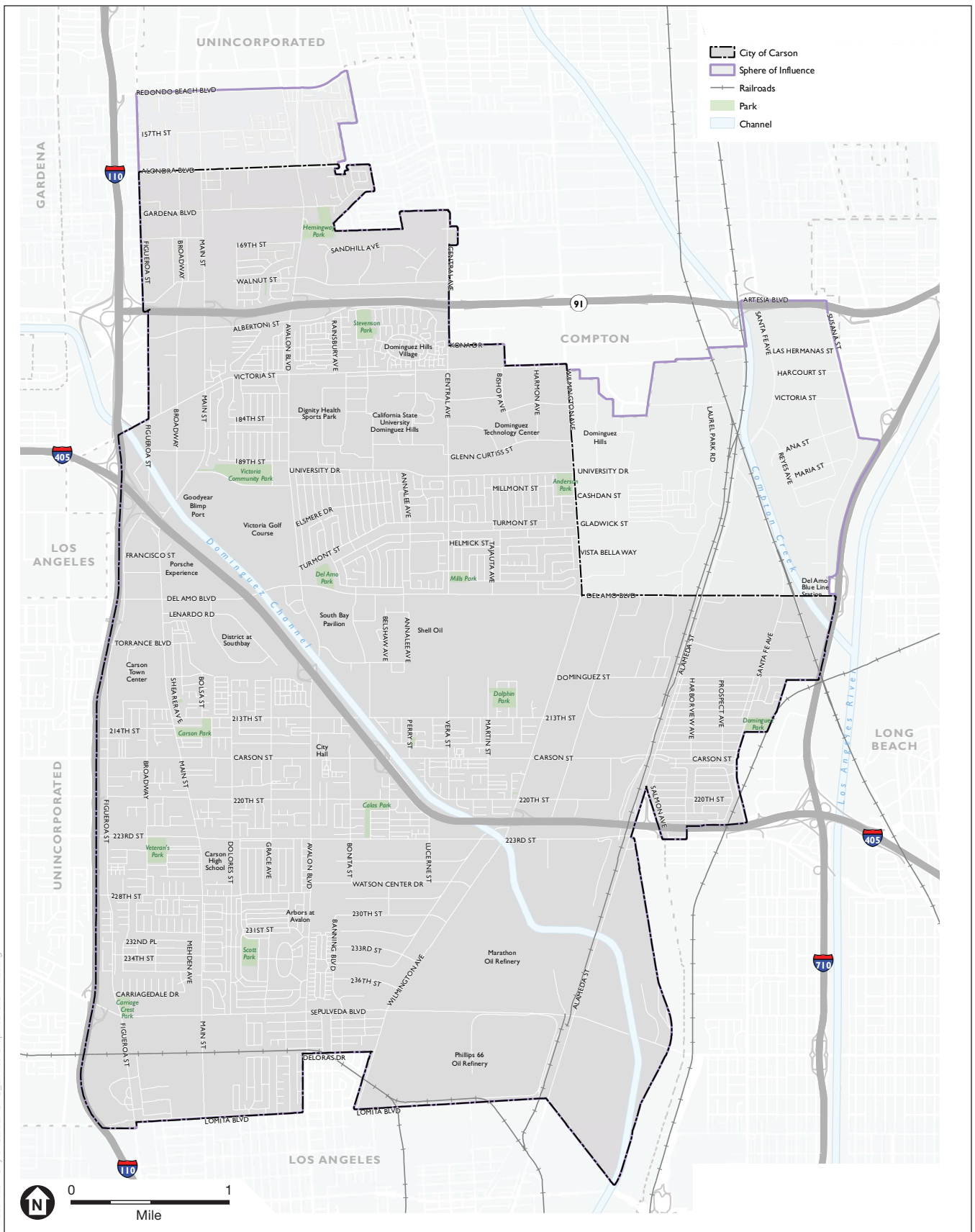
3.10.2 Environmental Setting

Carson is located in the South Bay region of southern Los Angeles County. The city is located about 10 miles south of downtown Los Angeles and three miles north of the Ports of Los Angeles and Long Beach. Interstate 405 (I-405) runs through Carson, and Interstate 110 (I-110) and Interstate 710 (I-710) are located just outside city boundaries, connecting Carson to other communities throughout the region. In addition, Carson is accessible via public transportation, including via Los Angeles Metro bus and light rail lines.

The Project's Planning Area includes Carson city limits and its sphere of influence (SOI). The Planning Area encompasses about 12,120 acres, of which 85 percent is in city limits and the remaining 15 percent is in the SOI. As shown in **Figure 3.10-1, Planning Area**, the Planning Area is bounded by West Redondo Beach Boulevard and the city of Compton on the north, the city of Long Beach on the east, the Los Angeles neighborhood of Wilmington on the south, and I-110 and South Figueroa Street on the west. The SOI includes a portion of unincorporated Los Angeles County, located in the northeast section of the Planning Area north of Del Amo Boulevard and east of Wilmington Avenue.

Existing Land Use

As of 2021, industrial uses, including warehousing, manufacturing, refineries, and storage, are the dominant existing land uses (47.2 percent of land area) within the Planning Area, as summarized in **Table 3.10-1, Existing Land Uses**, and illustrated by **Figure 3.10-2, Existing Land Uses**. Residential is the second largest land use (25.5 percent), with the majority being single-family residential.



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SOURCE: Dyett & Bhatia, 2021

Carson General Plan Update

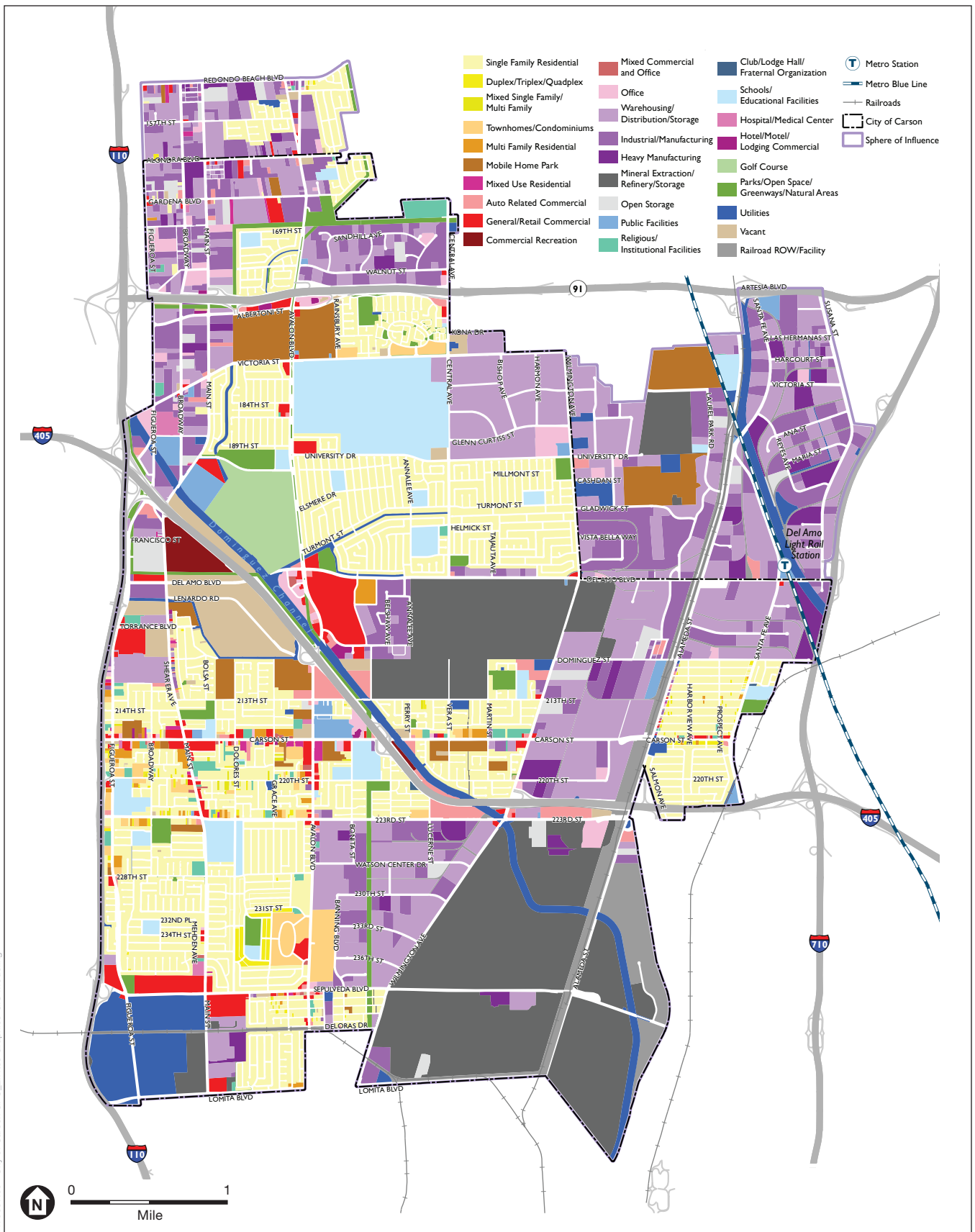
Figure 3.10-1
Planning Area



**TABLE 3.10-1
EXISTING LAND USES**

Existing Land Use Category	City of Carson		Sphere of Influence		Total Planning Area	
	Acres	Percent	Acres	Percent	Acres	Percent
Residential	2,858.8	28.0%	238.8	12.2%	3,097.6	25.5%
Duplex/Triplex/Quadplex	43.9	0.4%	1.3	0.1%	45.2	0.4%
Mixed Single Family/Multi Family	9.8	0.1%	0.2	0.0%	10.0	0.1%
Mixed Use Residential	25.1	0.2%	3.5	0.2%	28.6	0.2%
Mobile Home Park	244.5	2.4%	145.8	7.4%	390.3	3.2%
Multi-Family Residential	54.0	0.5%	0.2	0.0%	54.2	0.4%
Single Family Residential	2,326.1	22.9%	87.8	4.5%	2,413.9	19.9%
Townhomes/Condominiums	155.4	1.5%	-	-	155.4	1.3%
Commercial	638.8	6.2%	30.6	1.6%	669.4	5.5%
Auto Related Commercial	127.1	1.3%	11	0.6%	138.1	1.1%
Commercial Recreation	54.4	0.5%	-	-	54.4	0.4%
General/Retail Commercial	299.3	2.9%	4.1	0.2%	303.4	2.5%
Hotel/Model/Lodging Commercial	13.0	0.1%	-	-	13.0	0.1%
Mixed Commercial and Office	8.4	0.1%	-	-	8.4	0.1%
Office	136.6	1.3%	15.5	0.8%	152.1	1.3%
Industrial	4,295.7	42.2%	1,428.1	72.5%	5,723.8	47.2%
Heavy Manufacturing	156.9	1.5%	108.4	5.5%	265.3	2.2%
Industrial/Manufacturing	713.8	7.0%	459.6	23.3%	1,173.4	9.7%
Mineral Extraction/Refinery/Storage	1,765.9	17.4%	82.3	4.2%	1,848.2	15.2%
Open Storage	116.7	1.1%	34.1	1.7%	150.8	1.2%
Warehousing/Distribution/Storage	1,542.4	15.2%	743.7	37.8%	2,286.1	18.9%
Public/Community Facilities	762.6	7.5%	34.8	1.7%	797.4	6.6%
Club/Lodge Hall/Fraternal Organization	1.7	0.0%	-	-	1.7	0.0%
Hospital/Medical Center	20.9	0.2%	0.3	0.0%	21.2	0.2%
Public Facilities	107.5	1.1%	13.3	0.7%	120.8	1.0%
Religious/Institutional Facilities	84.2	0.8%	0.7	0.0%	84.9	0.7%
School/Educational Facilities	548.3	5.4%	20.5	1.0%	568.8	4.7%
Parks and Open Space	440.0	4.4%	3.5	0.2%	443.5	3.6%
Parks/Golf Course	330.0	3.3%	-	-	330.0	2.7%
Open Space/Greenways	110.0	1.1%	3.5	0.2%	113.5	0.9%
Other	1,154.7	11.4%	233.1	11.9%	1,387.8	11.5%
Railroad Facility	143.2	1.4%	3.3	0.2%	146.5	1.2%
Railroad ROW/Streets/Private Roads	229.5	2.3%	111.4	5.7%	340.9	2.8%
Utilities	510.4	5.0%	114.2	5.8%	624.6	5.2%
Vacant	271.6	2.7%	4.2	0.2%	275.8	2.3%
Total	10,150.6	100%	1,968.9	100%	12,119.5	100%

SOURCE: City of Carson, 2022. Chapter 2: Land Use and Revitalization. *Carson2040 General Plan*, Prepared by Dyett and Bhatia.



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SOURCE: City of Carson, 2017; Los Angeles GIS Data Portal, 2017; Dyett & Bhatia, 2021

Carson General Plan Update

Figure 3.10-2
Existing Land Uses



Most commercial uses, including retail and office, are located along major corridors, such as Carson Street, Avalon Boulevard, and Sepulveda Boulevard. Several large retail centers are located in Carson, including the South Bay Pavilion near Del Amo and Avalon boulevards that contains IKEA, Target, and several chain restaurants. The Porsche Experience Center, which opened in 2016, occupies approximately 49 acres of land bordered by I-405, Del Amo Boulevard, and South Main Street. The large vacant parcel south of the Porsche Experience Center on the side facing Del Amo Boulevard is proposed to be developed into a major retail center in the coming years, with portions currently under construction. This vacant parcel is around 150 acres, which accounts for a significant portion of the 276 acres (2.3 percent of the Planning Area) of total remaining vacant land within Carson.

Park and recreation land account for 3.6 percent of current land uses. The Planning Area includes many public facilities, including recreation facilities, schools, and sports arenas, which make up 10.2 percent of the Planning Area. The Sanitation Districts of Los Angeles County Joint Water Pollution Control Plant is located in the southwest corner of the Planning Area. The Links at Victoria Golf Course (which is proposed to be redeveloped with new recreational uses) and the Goodyear Blimp Base Airport are located on the west side of the Planning Area. California State University, Dominguez Hills is located in the northern portion of the city, along with Dignity Health Sports Park.

Major Development Projects and Trends

Between 2017 to 2021, Carson has developed approximately 2,620 new housing units, 220,400 square feet of commercial uses, and 518,000 square feet of industrial uses through projects such as the Carson Arts affordable housing project, Carson Town Center, and California Pak.¹ Additionally, recent residential mixed-use projects along West Carson Street and Avalon Boulevard, such as Union South Bay, feature ground-level retail that contributes to a denser, more urban feel in Carson. These buildings, as well as other new similar structures along Carson Street, are four to five stories in height and have pedestrian-oriented ground-floor restaurants and cafes that attract activity.

The redevelopment of the Victoria Golf Course, owned by Los Angeles County, as The Creek at Dominguez Hills, is a major project that will greatly enhance recreational opportunities in Carson. This project will develop 87 acres of the site with 532,500 square feet of recreational commercial uses including tennis courts and other recreational facilities. Another major development project is the District at South Bay, which was originally approved in 2006 as the Carson Marketplace Specific Plan but was renamed and most recently amended in 2021. This specific plan site is located south of I-405 and East Del Amo Boulevard with three phases of proposed development, including 1,250 residential units, 696,500 square feet of regional commercial uses, 15,000 square feet of restaurant uses, 1,567,100 square feet of light industrial uses, and up to 12 acres of community-serving uses that will include parks and plazas.² Redevelopment of the Shell site on East Del Amo Boulevard and South Wilmington Avenue is being explored for a mix of residential and commercial/office uses.

¹ City of Carson, 2021a. What's Happening in Development. Accessed August 2021.
<https://ci.carson.ca.us/CommunityDevelopment/planningprojects.aspx>

² City of Carson, 2021b. The District at South Bay 2021.
<https://ci.carson.ca.us/CommunityDevelopment/TheDistrict2021.aspx>

These recent development projects and proposals point to a trend toward higher density and intensity in Carson. Additionally, a number of projects, including the District at South Bay Specific Plan, are located on historically industrial sites that have undergone remediation or are currently being cleaned up.

3.10.3 Regulatory Framework

This section provides the relevant state, regional, and local regulations applicable to the Project. There are no federal regulations which apply to the Project in relation to this issue area.

State

California Government Code Section 65300

Government Code Sections 65300 states that each planning agency shall prepare, and the legislative body of each county and city shall adopt, a comprehensive, long-term general plan for the physical development of the county or city, and of any land outside its boundaries in which the planning agency's judgment bears relation to its planning.

California Government Code Sections 65919 to 65919.11

Government Code Sections 65919 to 65919.11 summarize procedures related to interagency referrals for different types of lead agency actions, including general plan updates. Among other referrals, this part of the Government Code provides a procedure and protocols for requesting counties to keep cities informed regarding land use actions within the unincorporated portions of spheres of influences and planning areas.

Sustainable Communities and Climate Protection Act of 2008 (Chapter 728, Statutes of 2008)

The Sustainable Communities and Climate Protection Act of 2008, otherwise known as Senate Bill (SB) 375, requires the integration of land use, housing, and transportation planning to achieve regional greenhouse gas (GHG) emission reductions, adopted by the California Air Resources Board. SB 375 requires Metropolitan Planning Organizations (MPOs) to develop a Sustainable Communities Strategy (SCS)—a new element of the regional transportation plan (RTP)—to plan for achieving these GHG reduction targets. The SCS must demonstrate the attainment of the regional GHG emissions reduction targets while accommodating the full projected population of the region.

Regional

Southern California Association of Governments 2020–2045 Regional Transportation Plan/Sustainable Communities Strategy (Connect SoCal)

The 2020–2045 Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS, referred to as Connect SoCal) was adopted in September 2020 by the Southern California Association of Governments' (SCAG) Regional Council. Connect SoCal is a long-range plan that guides land use and transportation strategies to increase mobility and achieve more sustainable growth patterns by locating housing, jobs, and transit closer together and increasing investment in transit and complete streets. These investments are targeted in Priority Growth Areas.

Los Angeles County General Plan

Provisions of the Los Angeles County General Plan, adopted in 2015 with a horizon year of 2035, apply to unincorporated areas of Los Angeles County, including the SOI adjacent to Carson city limits analyzed in the Project and EIR. The Land Use Element of the County’s General Plan guides future development and revitalization efforts by designating the general distribution, location, and extent of uses on these lands and is the main mechanism for accommodating growth and change in unincorporated areas.

Los Angeles County Subdivision and Zoning Codes (Title 21 and 22)

The County’s Zoning Code, Subdivision Code, and zoning map are implementation tools of the General Plan that provide details on specific allowable uses, design and development standards, and procedures. Zoning and subdivision regulations govern the division, design and use of individual parcels of land, including minimum lot size, lot configuration, access, height restrictions, and yard setbacks standards for structures. These apply to the unincorporated SOI portion of the Planning Area.

Local

City of Carson General Plan

The City of Carson’s General Plan is the principal land use policy instrument. The General Plan was last comprehensively updated in 2004 and an update of the General Plan is the subject Project.

City of Carson Zoning Ordinance

The City regulates the type, location, density, and scale of residential development through Article IX of the Carson Municipal Code (Carson Zoning Ordinance) and Zoning Map. Zoning regulations serve to implement the General Plan and are designed to protect and promote the public health, safety, comfort, convenience, and general welfare of residents. The Zoning Ordinance also helps to preserve the character and integrity of existing neighborhoods. The Zoning Ordinance and Zoning Map set forth residential development standards for each zoning district.

Specific Plans

The City uses specific plans to coordinate development and infrastructure improvements on large sites or series of parcels. Specific plans must be consistent with the General Plan and are typically used to establish development plans and standards to achieve the design and development objectives for a particular area. Existing and planned development under the following specific plans is included in buildout projections of the Project.

Dominguez Hills Village Specific Plan

The Dominguez Hills Village Specific Plan was adopted in 1996 and included development of 893 dwelling units and a 1.6-acre childcare center on approximately 100 acres of land north of South Central Avenue and East Victoria Street. In 2019, the Specific Plan was amended to reflect completion of 574 residential units on the parcel west of South Central Avenue (“DHV-Residential,” originally “Parcel 1”) and add a 175-unit multi-family component on the parcel at the northeast corner of South Central Avenue and East Victoria Street (“DHV-Commercial/Industrial,” originally “Parcel 2” or “Victoria Greens”) known as the Carson Landing project. This area includes a recreation center, a dog park, and a linear park contained in a gated community that

wraps around an existing Verizon communications tower and Southern California Gas Company pipeline facilities. The land will be remediated to comply with residential standards per environmental law. The 2019 amendment also approved development of 36 townhome units on the 1.6-acre site originally intended for a childcare center, referred to as the Brandywine project.

The District at South Bay Specific Plan (formerly Carson Marketplace/The Boulevards at South Bay)

Originally adopted as The Carson Marketplace Specific Plan in 2006 and renamed as The Boulevards at South Bay in 2011, the Specific Plan was once again amended in 2018 to update the development standards and guidelines for future development of the 157-acre portion of the Specific Plan area located south of Del Amo Boulevard, which was formerly a landfill. At this time, it was renamed The District at South Bay. The 11 acres north of Del Amo Boulevard is also part of the Specific Plan, but at the time of the latest amendment, had already been entitled for 300 units of multifamily housing. The remaining specific plan area is divided into three Planning Areas and consists of 1,250 residential units and 1.6 million square feet of retail, commercial, and hospitality uses including 350 hotel rooms. As of 2021, The District at South Bay is currently undergoing another amendment to introduce new light industrial uses along with up to approximately 12 acres of community serving uses to be known as the “Carson County Mart.”

In total, the 2021 Specific Plan Amendment would consist of approximately 2,312,390 square feet of light industrial, regional commercial, neighborhood-serving commercial/retail, restaurant/cafe, restaurants with a drive-thru component, and food and beverage kiosks. Overall, with these proposed modifications, the square footage proposed for development under the 2021 Specific Plan Amendment would increase the square footage of development on the 157 Acre Site under the approved 2018 Specific Plan, from 1,834,833 square feet to 2,312,390 square feet. The residential units would remain at 1,250 units.³

Union South Bay Specific Plan (formerly The Avalon Project)

The Union South Bay Specific Plan, adopted in 2015 and originally named The Avalon Project, is a recently completed (2020) mixed-use development located at 21601 Avalon Boulevard that included the redevelopment of a former gas station, small commercial strip center, and stand-alone office structure with 357 market-rate apartments and 32,000 square feet of ground-floor commercial uses. The project also included an approximately 10,000-square foot public plaza at the corner of Avalon Boulevard and Carson Street to activate the street level.

Birch Specific Plan

The Birch Specific Plan was adopted in 2019 and is a condominium project on 21809-21811 S. Figueroa Street consisting of 32 new units replacing single-family residential structures along the western edge of the city adjacent to I-110.

³ City of Carson, 2021c. Notice of Preparation of a Supplemental Environmental Impact Report/Notice of Scoping Meeting. https://ci.carson.ca.us/content/files/pdfs/planning/docs/projects/TheDistrict2021/Final%20NOP_District%20at%20South%20Bay.pdf

Torrance/Main Specific Plan

Located at 225 West Torrance Boulevard, the Torrance/Main Specific Plan proposes the reuse and revitalization of a brownfield property for urban residential or mixed-use development with up to 356 market-rate apartment units on 5.4 acres. This project is currently under review but is included in buildout projections.

Imperial Avalon Specific Plan

The Imperial Avalon Specific Plan proposes the redevelopment of an existing 27.3-acre mobile home park at 21207 South Avalon Boulevard with 680 market-rate apartments, 180 senior apartments, 380 townhomes, and about 7,200 square feet of restaurant/café uses. This project is currently under review but is included in buildout projections.

3.10.4 Project Impact Analysis

Thresholds of Significance and Methodology

Thresholds of Significance

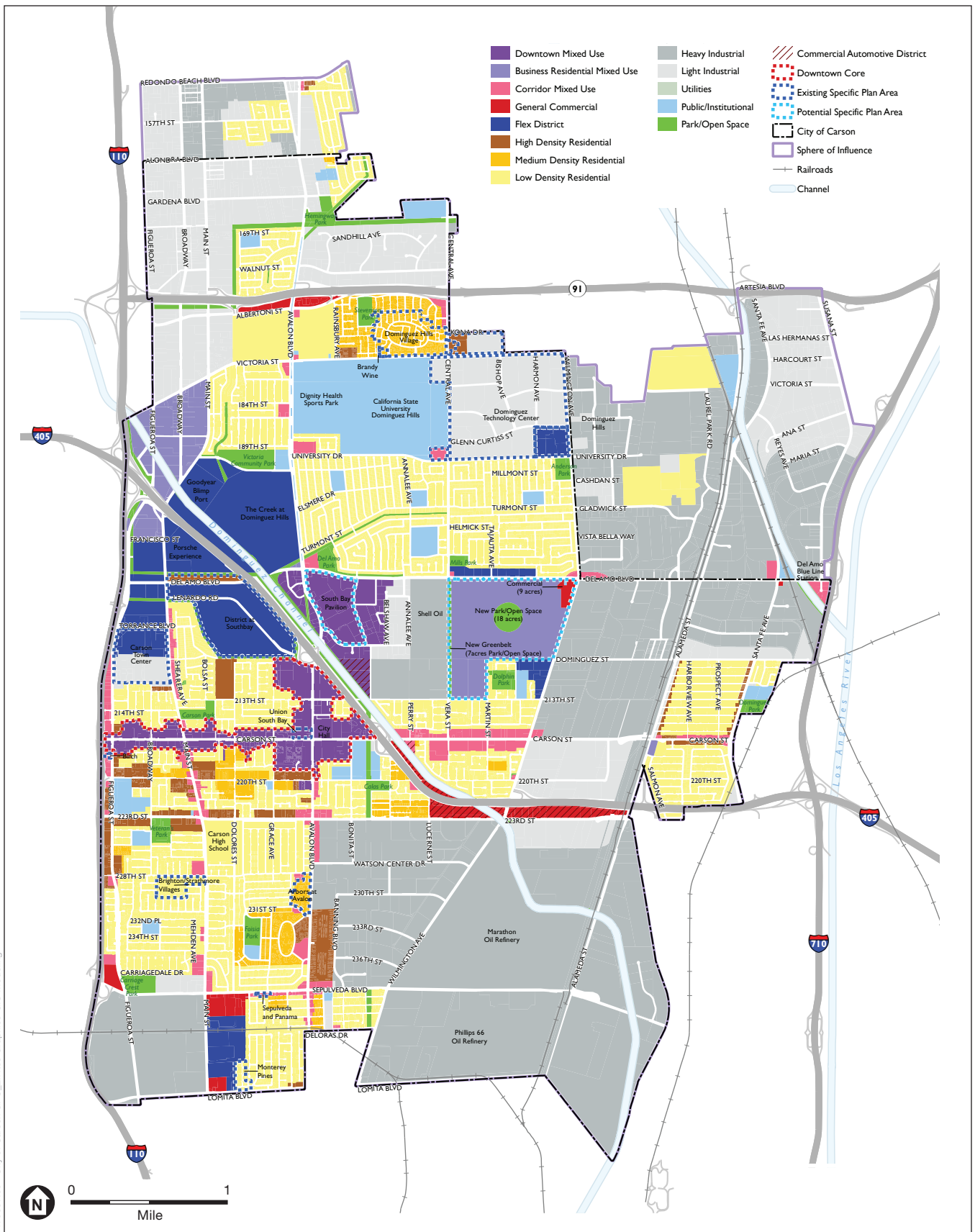
Appendix G of the State CEQA Guidelines provides screening questions that address potential impacts related to a number of environmental issues. The State CEQA Guidelines provide that lead agencies may use the questions set forth in the Appendix G to assess the significance of a project's environmental effects, and the use of Appendix G as a significance threshold is routinely sanctioned by the courts (although such use is not mandatory). Based on the Appendix G questions regarding land use and planning, a project would have a significant impact if the project would:

- Threshold LU-1:** Physically divide an established community; or
- Threshold LU-2:** 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.

Methodology

This analysis considers current and proposed General Plan policies, existing and proposed land use conditions within Carson, and applicable regulations and guidelines.

The proposed General Plan update has a year 2040 horizon; however, the proposed General Plan update does not speculate when buildout will occur, as long-range demographic and economic trends are difficult to predict. The designation within the proposed General Plan update of a site for certain use, as seen in **Figure 3.10-3, *General Plan Land Use Diagram***, does not necessarily mean that the site will be developed or redeveloped with that use during the planning period, as most development will depend on property owner initiative. For the purposes of this EIR, the environmental analysis assumes that sites will be developed or redeveloped with the designated land use at buildout of the Project.



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SOURCE: County of Los Angeles, 2017;
City of Carson, 2020; Dyett & Bhatia, 2021

Carson General Plan Update

Figure 3.10-3
General Plan Land Use Diagram



With much of the city currently “built out,” or developed, and with current and historical industrial uses that leave land in need of environmental remediation, undeveloped land available for development is limited in Carson. The General Plan focuses on infill development and revitalization to help the city transition from a predominantly industrial and suburban community to a complete city with an integrated mix of housing, employment, educational, cultural, and recreational options balanced with industrial uses. These efforts are targeted in the Core and in centers around the Core, expanding on recent development along Carson Street. Development in the centers, along key corridors, and large opportunity sites such as the Shell property on East Del Amo Boulevard and South Wilmington Avenue are envisioned to be connected by community-oriented Boulevards that feature public gathering spaces and pedestrian- and bicycle-oriented designs. New land use designations that introduce greater flexibility through emphasis on mixed uses instead of single uses are proposed to facilitate development to achieve this vision and respond to the need to accommodate the city’s growing and diverse population.

The total development potential for 2040 under the proposed General Plan update would result in increased development of residential units as well as commercial, office, and industrial square feet, as described in **Table 3.10-2, Potential Planning Area Buildout at 2040**. Retail, services, and hotel/lodging uses are included within the commercial category.

**TABLE 3.10-2
 POTENTIAL PLANNING AREA BUILDOUT AT 2040**

	Existing	Net New	Buildout Total
Non-Residential Development¹	34,997,000	11,531,000	46,528,000
Commercial¹	5,403,000	3,238,000	8,641,000
City Limits ¹	5,338,000	3,044,000	8,382,000
SOI ¹	65,000	194,000	259,000
Office¹	4,952,000	2,185,000	7,137,000
City Limits ¹	4,127,000	2,098,000	6,225,000
SOI ¹	825,000	87,000	912,000
Industrial¹	24,642,000	6,108,000	30,750,000
City Limits ¹	14,831,000	5,817,000	20,648,000
SOI ¹	9,811,000	291,000	10,102,000
Residential Development²	28,410	13,730	42,140
City Limits ²	26,710	13,690	40,400
SOI ²	1,700	40	1,740

NOTES: SOI = sphere of influence

¹ Measured in square feet

² Measured in units

SOURCE: City of Carson, 2022. Chapter 2: Land Use and Revitalization. *Carson2040 General Plan*. Prepared by Dyett and Bhatia.

Project Impact Analysis

Physically Divide a Community

Threshold LU-1: The Project would have a significant impact if future development allowed by the Carson2040 physically divided an established community.

Impact LU-1: *The Project would not physically divide an established community. (Less than Significant)*

The Project would improve connectivity and land use consistency within and between existing neighborhoods, thereby providing more linkages within the city and the region. The General Plan outlines strategies for greater integration of uses in different parts of the city and a better connection between employment and residential uses, with more areas designated for mixed-use development. It recognizes the physical elements that help define the character of Carson, including existing residential neighborhoods, downtown Core, industrial/business centers, and corridors. This structure helps establish a clear multi-modal network throughout the city by focusing on both community destinations as well as the efficiency, safety, and convenience of the modes of transportation in between. Higher densities, especially in mixed-use designations, increase capacity for residential development near community-serving commercial, retail, and office uses as well as schools, parks, and recreational facilities, and proposed improvements to the bicycle, pedestrian, and road networks will make it easier for residents to travel throughout the community. Furthermore, changes to land use designations under the Project would consolidate designations to better reflect existing land uses and would not result in the division of any established community. Therefore, future development allowed by the proposed General Plan update would not physically divide an established community, and the impact is less than significant.

Proposed General Plan Policies that Address the Impact

Land Use and Revitalization

Guiding Policies

- LUR-G-1 Maintain a balanced land use program that promotes a diversified economic base and capitalizes on Carson’s location and assets – strong industrial economy, access to major freeways, rail corridors, airports, and the ports of Long Beach and Los Angeles, and the presence of California State University Dominguez Hills.

- LUR-G-2 Balance employment and housing within the community to provide more opportunities for Carson residents to work locally, cut commute times, and improve air quality.

- LUR-G-4 Promote a diversity of complementary uses in different parts of the city, including mixed flexible office space, retail, dining, residential, hotels, and other compatible uses, to foster vibrant, safe, and walkable environments, with flexibility to accommodate emerging uses and building typologies.

- LUR-G-6 Encourage revitalization of corridors as pedestrian-oriented, mixed-use residential, retail, and office community spines, serving as focal points for neighborhood amenities and services, and helping foster neighborhood identity and vitality.

- LUR-G-7 Develop Carson’s central Core—extending approximately 1.7 miles both east-west along West Carson Street and north-south along Avalon Boulevard and including the South Bay Pavilion—into a vibrant, pedestrian-oriented mixed-use hub of the community, with housing, retail, and other commercial uses, and civic uses and community gathering spaces.
- LUR-G-8 Promote development of a high-intensity Flex District in the “triangle” near at the I-405/I-110 interchange, capitalizing on the excellent regional access and potential availability of large sites to accommodate a diversity of commercial, residential, and light-industrial uses.
- LUR-G-9 Locate medium and high-density development along major corridors and major re-development sites in the central Core, to focus housing near regional access routes, transit stations, employment centers, shopping areas, and public services.
- LUR-G-11 Encourage mixed-use development (two or more uses within the same building or in close proximity on the same site), especially in the Core area, to promote synergies between uses.

Implementing Policies

- LUR-P-8 Promote development of neighborhood-scaled commercial centers in residential areas to serve the everyday needs of nearby residents.
- LUR-P-10 Support continued evolution of the West Carson Street (Carson’s “main street”), with a vibrant mix of complementary commercial, residential, and civic uses. Do not permit new automobile-oriented establishments such as car washes, or drive-through uses with access directly from Carson Street.
- LUR-P-14 Promote development of the Broadway/Figueroa Street as Business Mixed-Use. Focus on non-hazardous light industrial, maker, and research and development uses for this area. Live/work units or residential uses are permitted conditionally as part of a cohesive plan that acknowledges their location within a flexible/employment district, considers the long-term development potential of adjacent properties, and presents a strategy for transition of industrial uses to residential uses.
- This is an industrial area now evolving with a variety of uses including breweries, restaurants, and residential uses. The area is well situated, proximate to Cal State Dominguez Hills and two interstates. Any residential uses in the area should be accepting of noise, glare, parking, and other constraints that come with part of being in a diverse mixed-use rather than residential only setting.*
- LUR-P-16 Where larger parcels—such as the Shell site—are redeveloped, require development to implement urban design policies, including creation of smaller blocks (typically with no dimension larger than 300 to 600 feet dependent on use, with smaller blocks in residential areas) to create walkable, urban environments; buildings and landscapes that relate to the surroundings, with high-level of public-realm amenities, such as tree-lined streets; sidewalks, pedestrian paths, and crossings; and plazas and other gathering spaces for workers and visitors. Site planning for new construction should ensure that

streets are lined with occupied buildings or landscapes, with parking and service facilities tucked behind or away from public streets.

- LUR-P-18 Promote infill mixed-use development in either a vertical or horizontal configuration when aging shopping centers are redeveloped to create mixed-use corridors with a range of housing types at mid-to-high densities along their lengths and activity nodes at key intersections with retail/commercial uses to serve the daily needs of local residents.

This policy applies to areas that are designated as Corridor Mixed Use or Downtown Mixed Use, such as within the city's Core and Carson Plaza near the [California State University, Dominguez Hills] CSU-DH campus.

Community Character, Identity, and Design

Guiding Policies

- CCD-G-1 Foster Carson's sense of place and arrival through careful attention to building and public realm design, and cohesive streetscapes that promote community and neighborhood identity.
- CCD-G-3 Promote the Core as Carson's energetic commercial, cultural, and residential center, promoting a diversity of building types and variety of options for living and working in the heart of the community.
- CCD-G-6 Strengthen community identity within Neighborhood Villages through high-quality building and streetscape design and promote attractive pedestrian connections to access neighborhood centers for local services and amenities.

Implementing Policies

- CCD-P-1 Encourage mixed-use projects by allowing flexibility in site and building design standards outlined in the Carson Municipal Code Zoning Ordinance.

Such standards that could be flexed include setbacks, open space, parking, dwelling units, minimum lot area, and height requirements.

Mitigation Measures

None required.

Consistency with Applicable Land Use Plans

Threshold LU-2: The Project would have a significant impact if future development allowed by the Carson2040 caused 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 LU-2: *The Project would not 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. (Less than Significant)*

The General Plan updates policies and land use designations for future development and would replace the 2004 General Plan. Existing regulations would be updated as needed to be consistent with the updated General Plan and/or effectively implement the Project, if it were adopted.

Additionally, the City’s Zoning Ordinance would be revised to implement the Project, as required by state law (Government Code Section 65860[a]), and it would translate the proposed General Plan policies into specific use regulations, development standards, and performance criteria to govern development on individual properties. The Zoning Ordinance would ultimately prescribe standards, rules, and procedures for development, while the Zoning Map will provide more detail than the proposed General Plan Land Use Diagram. The proposed General Plan update includes multiple policies from the 2004 General Plan and proposes more stringent policies for the purpose of avoiding or mitigating an environmental effect.

The City has adopted specific plans to tailor appropriate development standards and policies to individual neighborhoods, as described in the Regulatory Setting above. By state law, specific plans must be consistent with the General Plan. As of 2021, development under the specific plans is still underway; however, the proposed General Plan update takes these plans into consideration such that changes to land use designations within the boundaries of various specific plans, as well as throughout the city, will continue to be harmonious and consistent with existing land uses. For example, Development District 3 of the District at South Bay Specific Plan Area (north of Del Amo Boulevard) has been developed with 300 residential units on the 11-acre parcel; the Proposed Plan changes the land use designation of this parcel from “Mixed Use – Residential” to “High Density Residential” to reflect the new use more accurately. Likewise, the Dominguez Technology Center Phase One Specific Plan Area (on the northwest corner of East University Drive and South Wilmington Avenue) is proposed as “Flex District” in place of “Light Industrial” to reflect existing office uses at that location. As such, redesignation under the proposed General Plan update is designed to increase consistency with existing uses following completion of development under these specific plans and would not result in any conflicts. Proposed General Plan policies would not conflict with policies included in these specific plans adopted for the purpose of avoiding or mitigating an environmental effect.

The City of Carson Planning Division has primary responsibility for administering the laws, regulations, and requirements that pertain to the physical development of the city. Specific duties relating to implementation of the proposed General Plan update would include preparing zoning and subdivision ordinance amendments, reviewing development applications, conducting investigations and making reports and recommendations on planning and land use, zoning, subdivisions, development plans, and environmental regulations.

The Project also must be consistent with regional and local plans. Policies within the proposed General Plan update would integrate land use, housing, and transportation planning to achieve regional greenhouse gas emission reductions by promoting compact, infill, and mixed-use development, therefore supporting the Sustainable Communities Strategy (Connect SoCal). Moreover, proposed General Plan policies encourage remediation and redevelopment of brownfield sites, improving the environmental quality of lands in the Planning Area. Additionally, the proposed General Plan update seeks to maintain consistency with the policies of the Los Angeles County General Plan and the Code of Ordinances. The proposed General Plan update designates the lands within the SOI as Light Industrial, Heavy Industrial, Low Density Residential, High Density Residential, Utilities, and Corridor Mixed Use, as seen in Figure 3.10-2. Light Industrial, Heavy Industrial, Utilities, and Low Density Residential designations are

consistent with existing County zoning designations in these areas. Places that are designated as High Density Residential or Corridor Mixed Use—located at the intersection of Redondo Beach and Avalon boulevards as well as along Del Amo Boulevard at Wilmington and Santa Fe avenues—reflect existing on-the-ground uses, including neighborhood commercial/retail and multifamily residential units, and have been “pre-zoned” to be consistent with the proposed General Plan update in the event that these areas of the SOI are annexed into city limits. Unless these lands are annexed, County land use designations and zoning apply.

Given that the proposed General Plan update does not conflict with any other agencies’ applicable land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect, conflicts with existing local and regional plans and the Zoning Ordinance are expected to have a less than significant impact.

Proposed General Plan Policies that Address the Impact

Guiding Policies LUR-G-2 and LUR-G-11 and Implementing Policy LUR-P-8 as discussed under Impact LU-1, in addition to the following:

Land Use and Revitalization

Guiding Policies

LUR-G-5 Provide opportunities for new residential development in a variety of settings, including through infill and redevelopment, without impacting existing neighborhoods or creating conflicts with industrial operations, while conserving mobile homes, which provide more affordable housing.

LUR-G-12 Promote adaptive reuse and environmental remediation of brownfield sites, sites with abandoned buildings and facilities, or underutilized properties with productive uses.

A brownfield is a property on which expansion, redevelopment, or reuse may be complicated by the presence or potential presence of a hazardous substance, pollutant, or contaminant. Cleaning up and reinvesting in these properties promotes efficient land use, facilitates job growth, utilizes existing infrastructure, and takes development pressures off other sites.

Implementing Policies

LUR-P-17 Ensure that new industrial uses in the Business Mixed-Use designation minimize adverse off site air quality, noise, or glare impacts incompatible with permitted residential.

LUR-P-21 Establish performance and development standards to allow a wide range of uses as long as those uses will not adversely impact adjacent uses. These performance and development standards are the minimum necessary to assure safe, functional, and environmentally sound activities.

Details of this would need to be developed as part of the Zoning Code.

LUR-P-22 When industrial land directly adjacent to existing or permitted residential, parks, schools or other sensitive uses is developed or intensified, require a buffer of natural vegetation, open space, berms, and trees between the new residential development and industrial land. Other operation factors, including

hours of operation, traffic, noise, and air quality impacts, shall be assessed and mitigated at time of project review.

Details of this would need to be developed as part of the Zoning Code. The buffer can help ameliorate visual impacts, and prevent reduce impacts related to light and glare, and potentially noise and air quality.

LUR-P-23 Undertake planned development and specific plans for unique projects as a means to achieve high community standards, address neighborhood or significant site-specific issues, ensure compatibility between a number of uses, on large parcels, and when needed as part of a redevelopment or environmental remediation strategy.

Such areas that would benefit from a specific plan include the Shell Site and South Bay Pavilion if redeveloped.

LUR-P-25 Update the City’s Zoning Ordinance and Subdivision Regulations contained in the Municipal Code for consistency with the General Plan.

This would include:

- Establishment of new base districts;
- Establishment of new overlay districts as appropriate;
- New development regulations that reflect policy direction contained throughout the Plan;
- Use regulations identifying permitted and conditionally permitted uses consistent with the policies applicable to the General Plan land use designation; and
- Minimum and maximum development intensities consistent with the General Plan land use policies.

Open Space and Environmental Conservation

Guiding Policies

OSEC-G-2 Seek opportunities for the restoration of natural open space during redevelopment of industrial or remediated landfills—including land currently used to produce resources—to create open space that supports outdoor recreation, protects public health and safety, and improves plant and animal habitat.

OSEC-G-4 Recognize and support the preservation of wildlife migration routes and special status species that are state or federally listed as Endangered, Threatened, or Rare.

OSEC-G-23 Undertake initiatives outlined in the Climate Action Plan to enhance sustainability by reducing the community’s greenhouse gas (GHG) emissions and fostering green development patterns—including buildings, sites, and landscapes.

Mitigation Measures

None required.

3.10.5 Cumulative Impact Analysis

The geographic context for the cumulative impacts associated with land use issues is the South Bay region of southern Los Angeles County, which assumes full build-out of the proposed Carson General Plan, in combination with build-out of neighboring jurisdictions general plans. Future development in the area, including growth anticipated under the proposed General Plan update, would not conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect, as future development in each jurisdiction would be required to be consistent with each jurisdiction's general plan and zoning code. In addition, future development in the South Bay region of southern Los Angeles County would be required to be consistent with regional plans such as Connect SoCal. Finally, future development in the area would be required to undergo planning reviewing in each jurisdiction, which would ensure the future development would not divide an established community. For these reasons, future development in the South Bay region of southern Los Angeles County, including growth anticipated under the proposed General Plan update, would have a less-than-significant cumulative impact with respect to land use and planning.

3.11 Noise

3.11.1 Introduction

This section provides an analysis of potential environmental impacts related to noise from future development allowed under the Project, including those impacts associated with noise standards compliance, groundborne vibration, ambient noise levels, railway noise and airport noise. This section also evaluates the characteristics, measurement, and physiological effects of noise; characteristics of groundborne vibration; and existing sources of noise and vibration in the Planning Area, as well as relevant federal, state, and local regulations and programs.

No comments were received in response to the Notice of Preparation (NOP) and Recirculated NOP regarding noise.

3.11.2 Environmental Setting

Noise

Noise Characteristics and Measurement

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 unwanted sound (i.e., loud, unexpected, or annoying sound). Acoustics is defined as the physics of sound. 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 determines the sound level and characteristics of the noise perceived by the receiver. Acoustics addresses primarily the propagation and control of sound.¹

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. 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 to 140 dB corresponding to the threshold of feeling and pain, respectively. Pressure waves traveling through air exert a force registered by the human ear as sound.²

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 the audible frequencies of a sound are measured, a sound spectrum is plotted consisting of a range of frequency 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.³ The typical human ear is not equally sensitive to this frequency range. As a consequence, when assessing potential noise impacts, sound is measured using an electronic filter that deemphasizes

¹ Egan, M David, 1988. Architectural Acoustics, Chapter 1, March.

² Egan, M David, 1988. Architectural Acoustics, Chapter 1, March.

³ Egan, M David, 1988. Architectural Acoustics, Chapter 1, March.

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.⁴ Some representative common outdoor and indoor noise sources and their corresponding A-weighted noise levels are shown in **Figure 3.11-1, Decibel Scale and Common Noise Sources**.

An individual's noise exposure is a measure of noise over a period of time; a noise level is a measure of noise at a given instant in time, as presented in Figure 3.11-1. However, noise levels rarely persist at that level over a long period of time. Rather, community noise varies continuously over a period of time with respect to the sound sources contributing to the community noise environment. Community noise is primarily the product of many distant noise sources, which constitute a relatively stable background noise exposure, with many of the individual contributors unidentifiable. The background noise level changes throughout a typical day, but does so gradually, corresponding with the addition and subtraction of distant noise sources, such as changes in traffic volume. What makes community noise variable throughout a day, besides the slowly changing background noise, is the addition of short-duration, single-event noise sources (e.g., aircraft flyovers, motor vehicles, sirens), which are readily identifiable to the individual.⁵

These successive additions of sound to the community noise environment change the community noise level from instant to instant, 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, which are applicable to the Project.⁶

- 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 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 dB to measured noise levels between the hours of 10:00 p.m. to 7:00 a.m. to account 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 average A-weighted noise level during a 24-hour day that includes an addition of 5 dB to measured noise levels between the hours of 7:00 p.m. to 10:00 p.m. and an addition of 10 dB to noise levels between the hours of 10:00 p.m. to 7:00 a.m. to account for noise sensitivity in the evening and nighttime, respectively.

⁴ Egan, M David, 1988. Architectural Acoustics, Chapter 1, March.

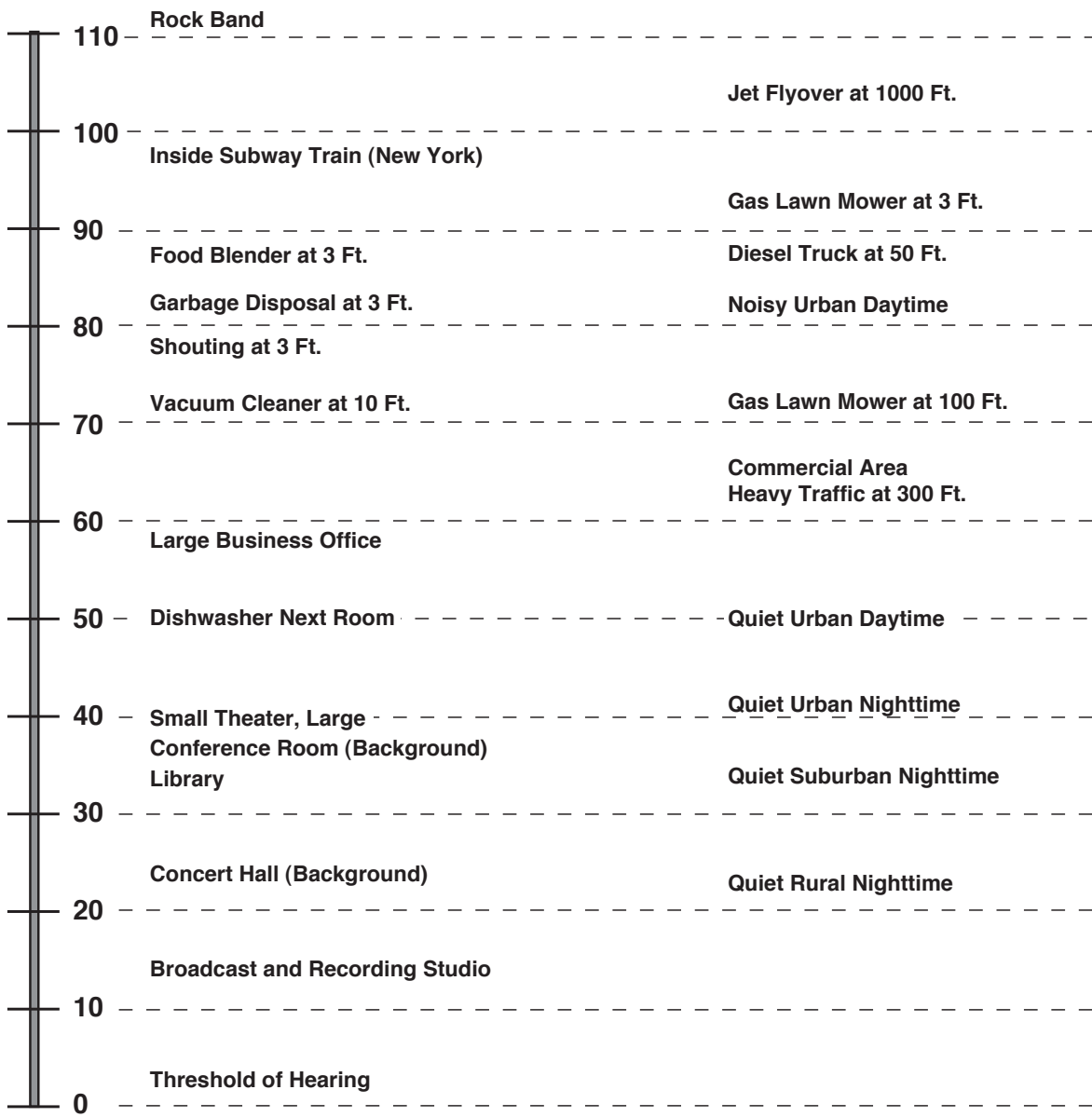
⁵ Caltrans, 2013a. Technical Noise Supplement (TeNS), Section 2.2.2.1, September.

⁶ Caltrans, 2013a. Technical Noise Supplement (TeNS), Section 2.2.2.2, September.

**NOISE LEVEL
(dBA, Leq)**

**COMMON INDOOR
NOISE LEVELS**

**COMMON OUTDOOR
NOISE LEVELS**



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SOURCE: State of California, Department of Transportation (Caltrans), Technical Noise Supplement (TeNS). October 1998. Available: [http://www.dot.ca.gov/hq/env/noise/pub/Technical Noise Supplement.pdf](http://www.dot.ca.gov/hq/env/noise/pub/Technical%20Noise%20Supplement.pdf)

Carson General Plan Update

Figure 3.11-1

Decibel Scale and Common Noise Sources



Effects of Noise

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.⁷

With regard to the subjective effects, the responses of individuals 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:⁸

- 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; and
- A change in ambient noise levels of 10 dBA is subjectively heard as doubling of the perceived loudness.

These relationships occur in part because of the logarithmic nature of sound and the decibel scale. The human ear perceives sound in a non-linear fashion; therefore, the dBA scale was developed.

⁷ Caltrans, 2013a, Technical Noise Supplement (TeNS), Section 2.2.1, September.

⁸ Caltrans, 2013a, Technical Noise Supplement (TeNS), Section 2.2.1, September.

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 dBA 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.⁹

Sources of Noise

In the urban setting, as in most of the city, sources of noise include vehicular traffic on local streets, major arterial, freeways/highways, passenger and freight trains on railroad tracks, aircraft overflight from neighboring airports, as well as exterior operations associated with commercial and industrial land uses, such as loading/unloading activity, trash compactors, heavy-duty truck movement, trash collection, barking dogs, and amplified sound. A more detailed discussion on the noise sources and their potential impacts to the existing environment in Section 3.11.4, *Existing Noise Environment*, below.

Noise Attenuation

When noise propagates over a distance, the noise level reduces with distance depending on the type of noise source and the propagation path. Noise from a localized source (i.e., point source) propagates uniformly outward in a spherical pattern, referred to as “spherical spreading.” Stationary point sources of noise, including stationary mobile sources such as idling vehicles, attenuate (i.e., reduce) at a rate between 6 dBA for acoustically “hard” sites and 7.5 dBA for “soft” sites for each doubling of distance from the reference measurement, as their energy is continuously spread out over a spherical surface (e.g., for hard surfaces, 80 dBA at 50 feet attenuates to 74 at 100 feet, 68 dBA at 200 feet, etc.). Hard sites are those with a reflective surface between the source and the receiver, such as asphalt or concrete surfaces or smooth bodies of water. No excess ground attenuation is assumed for hard sites and the reduction in noise levels with distance (drop-off rate) is simply the geometric spreading of the noise from the source. Soft sites have an absorptive ground surface, such as soft dirt, grass, or scattered bushes and trees, which in addition to geometric spreading, provides an excess ground attenuation value of 1.5 dBA (per doubling distance).¹⁰

Roadways and highways consist of several localized noise sources on a defined path, and hence are treated as “line” sources, which approximate the effect of several point sources. Noise from a line source propagates over a cylindrical surface, often referred to as “cylindrical spreading.”¹¹ Line sources (e.g., traffic noise from vehicles) attenuate at a rate between 3 dBA for hard sites and 4.5 dBA for soft sites for each doubling of distance from the reference measurement.¹² Therefore, noise due to a line source attenuates less with distance than that of a point source with increased distance.

⁹ Caltrans, 2013a. Technical Noise Supplement (TeNS), Section 2.2.1.1, September.

¹⁰ Caltrans, 2013a. Technical Noise Supplement (TeNS), Section 2.1.4.2, September.

¹¹ Caltrans, 2013a. Technical Noise Supplement (TeNS), Section 2.1.4.1, September.

¹² Caltrans, 2013a. Technical Noise Supplement (TeNS), Section 2.1.4.1, September.

Additionally, receptors located downwind from a noise source can be exposed to increased noise levels relative to calm conditions, whereas locations upwind can have lowered noise levels. Atmospheric temperature inversion (i.e., increasing temperature with elevation) can increase sound levels at long distances (e.g., more than 500 feet). Other factors such as air temperature, humidity, and turbulence can also have significant effects on noise levels.¹³

Vibration

Vibration Characteristics and Measurement

Vibration can be interpreted as energy transmitted in waves through the ground or structure, which generally dissipate with distance from the vibration source. Because energy is lost during the transfer of energy from one particle to another, vibration becomes less perceptible with increasing distance from the source.

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.¹⁴ In contrast to airborne noise, groundborne vibration is not a common environmental problem, as it is unusual for vibration from sources such as buses and trucks to be perceptible, even in locations close to major roads. Some common sources of groundborne vibration are trains, heavy trucks traveling on rough roads, and construction activities, such as blasting, pile-driving, and operation of heavy earth-moving equipment.¹⁵

There are several different methods that are used to quantify vibration. The peak particle velocity (PPV) is defined as the maximum instantaneous peak of the vibration signal in inches per second (in/sec), and is mostly used to describe vibration impact 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 measure RMS. The relationship of PPV to RMS is expressed in terms of the “crest factor,” defined as the ratio of the PPV amplitude to the RMS amplitude. PPV is typically a ratio of 1.7 to six times greater than RMS vibration velocity. The decibel notation VdB acts to compress the range of numbers required to describe vibration. Typically, groundborne vibration generated by man-made activities attenuates rapidly with distance from the source of the vibration. Sensitive receptors for vibration include buildings where vibration would interfere with operations within the building or cause damage (especially old masonry structures), locations where people sleep, and locations with vibration sensitive equipment.¹⁶

Effects of Vibration

Building vibration may be perceived by the occupants as the motion of building surfaces, the rattling of items moving on shelves or hanging on walls, or as a low-frequency rumbling noise. The rumbling noise is caused by the vibrating walls, floors, and ceilings that are radiating sound waves. In extreme cases, the vibration can cause damage to buildings. However, building damage

¹³ Caltrans, , 2013a. Technical Noise Supplement (TeNS), Section 2.1.4.3, September.

¹⁴ FTA, 2018. *Transit Noise and Vibration Impact Assessment Manual*, September.

¹⁵ Caltrans, 2013b. Transportation and Construction Vibration Guidance Manual, September.

¹⁶ FTA, 2018. *Transit Noise and Vibration Impact Assessment Manual*, September.

is not a factor for most projects, except for occasional blasting and pile driving during construction. Annoyance from vibration often occurs when vibration levels exceed the threshold of perception by only a small margin. A vibration level that causes annoyance will be well below the damage threshold for normal buildings.

Sources of Vibration

Typical sources of groundborne vibration are construction activities (e.g., blasting, pile driving, and operating heavy-duty earth-moving equipment), steel-wheeled trains, and occasional traffic on rough roads. Problems with groundborne vibration and noise from these sources are usually localized to areas within approximately 100 feet of the vibration source, although there are examples of groundborne vibration causing interference out to distances greater than 200 feet.¹⁷ When roadways are smooth, vibration from traffic, even heavy trucks, is rarely perceptible.

Vibration Attenuation

Vibration attenuates by 9VdB with the doubling of distance. For example, a vibration level at 50 feet from the source is 9 VdB lower than the vibration level at 25 feet. Vibration at 100 feet from the source is 18 VdB lower than the vibration level at 25 feet. Therefore, receptors at 50 feet from the construction activity may be exposed to groundborne vibration up to 78 VdB (or 0.030 inch/sec PPV or lower). Receptors at 100 feet from the source may be exposed to groundborne vibration up to 69 VdB.

3.11.3 Regulatory Framework

A number of federal and state agencies have prepared guidelines that identify standards and regulations concerning noise compatibility in the workplace and in residences. The following regulations have been adopted by the various agencies to directly relate to the proposed General Plan update, and assist in its implementation.

Federal

The United States Noise Control Act of 1972

The Noise Control Act recognized the role of the Federal government in dealing with major commercial noise sources in order to provide for uniform treatment of such sources. As Congress has the authority to regulate interstate and foreign commerce, regulation of noise generated by such commerce also falls under congressional authority. The Federal government specifically preempts local control of noise emissions from aircraft, railroad and interstate highways.

The EPA has identified acceptable noise levels for various land uses, in order to protect public welfare, allowing for an adequate margin of safety, in addition to establishing noise emission standards for interstate commerce activities.

The U.S. Department of Housing and Urban Development (HUD) has established policies for granting financial support for the construction of dwelling units in noise impacted areas.

Table 3.11-1, *HUD External Noise Exposure Standards for New Residential Construction*, shows

¹⁷ FTA, 2006. Transit Noise and Vibration Impact Assessment, May.

noise exposure levels used by HUD to determine eligibility for financial backing for new or rehabilitative residential construction in noise impacted areas, in addition to providing special requirements. As indicated in Table 3.11-1, financial assistance from HUD would still be possible when noise exposure is between 65 dBA and 75 dBA, if adequate sound attenuation is provided to achieve appropriate noise reduction.

**TABLE 3.11-1
 HUD EXTERNAL NOISE EXPOSURE STANDARDS FOR NEW RESIDENTIAL CONSTRUCTION**

HUD Approval	Site Noise Exposure	Noise Level (L _{dn})	Special Approval/Requirement
Standard	Acceptable	Not exceeding 65 dB	None
Discouraged	Normally Acceptable	65 dB to 75 dB	Building sound attenuation of 5 dB for 65-70 dB noise level and 10 dB for 70-75 dB noise level Special Environmental Clearance Approval of Regional Administration
Prohibited	Unacceptable	75+ dB	Approval of Assistant Secretary of Community Planning EIS required

SOURCE: HUD External Noise Exposure Standards for New Residential Construction July 12, 1979, as amended at 50 FR 9268, Mar. 7, 1985.

Federal Transit Administration Vibration Standards

There are no federal vibration standards or regulations adopted by any agency specifically for evaluating vibration impacts from land use development projects such as those that would be allowed under the Project. However, Federal Transit Administration (FTA) has adopted vibration criteria that are commonly used to evaluate potential structural damage to buildings by building category from construction activities. The vibration damage criteria adopted by FTA are shown in **Table 3.11-2, Construction Vibration Damage Criteria.**

**TABLE 3.11-2
 CONSTRUCTION VIBRATION DAMAGE CRITERIA**

Building Category	PPV (in/sec)
I. Reinforced-concrete, steel, or timber (no plaster)	0.5
II. Engineered concrete and masonry (no plaster)	0.3
III. Non-engineered timber and masonry buildings	0.2
IV. Buildings extremely susceptible to vibration damage	0.12

NOTES: PPV = peak particle velocity; in/sec = inches per second

SOURCE: Federal Transit Administration, 2018. *Transit Noise and Vibration Impact Assessment Manual*. September.

FTA has also adopted vibration criteria associated with the potential for human annoyance from groundborne vibration for the following three land use categories: Category 1 – High Sensitivity, Category 2 – Residential, and Category 3 – Institutional. FTA defines Category 1 as buildings

where vibration would interfere with operations within the building, including vibration-sensitive research and manufacturing facilities, historic buildings, 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 still have the potential for activity interference. The FTA uses a screening distance of 100 feet for highly vibration-sensitive buildings (e.g., historic buildings, hospital with vibration sensitive equipment, Category 1) and 50 feet for residential uses (Category 2) and institutional land uses with primarily daytime use (Category 3). The vibration criteria associated with human annoyance for these three land-use categories are shown in **Table 3.11-3, *Indoor Groundborne Vibration Impact Criteria for General Assessment***. No vibration criteria have been adopted or recommended by FTA for commercial and office uses.

**TABLE 3.11-3
INDOOR GROUNDBORNE 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	65 VdB ⁴	65 VdB ⁴	65 VdB ⁴
Category 2: Residences and buildings where people normally sleep.	72 VdB	75 VdB	80 VdB
Category 3: Institutional land uses with primarily daytime uses.	75 VdB	78 VdB	83 VdB

NOTES: VdB = vibration velocity decibels

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 source per day.

⁴ This criterion is based on levels that are acceptable for most moderately sensitive equipment such as optical microscopes.

SOURCE: Federal Transit Administration, 2018. *Transit Noise and Vibration Impact Assessment Manual*. September.

State

State of California Noise Standards

The Office of Noise Control in the State Department of Health Services has developed criteria and guidelines for local governments to use when setting standards for human exposure to noise and preparing noise elements for General Plans. These guidelines include noise exposure levels for both exterior and interior environments. In addition, Title 25, Section 1092 of the California Code of Regulations sets forth requirements for the insulation of multiple-family residential dwelling units from excessive and potentially harmful noise. The state indicates that locating residential units in areas where exterior ambient noise levels exceed 65 CNEL is undesirable. Whenever such units are to be located in such areas, the developer must incorporate construction features into the building design that would reduce interior noise levels to 45 dBA CNEL. **Table 3.11-4, *Noise and Land Use Compatibility Matrix***, and **Table 3.11-5, *State Interior and Exterior Noise Standards***, summarize standards adopted by state agencies. Table 3.11-4 presents criteria used to assess the compatibility of proposed land uses with the noise environment. These standards and criteria will

be incorporated into the land use planning process to reduce future noise and land use incompatibilities. These tables are the primary tools that allow the City of Carson (City) to ensure integrated planning for compatibility between land uses and outdoor noise.

**TABLE 3.11-4
 NOISE AND LAND USE COMPATIBILITY MATRIX**

Land Use	Community Noise Exposure L _{dn} or CNEL, dBA			
	Normally Acceptable	Conditionally Acceptable	Normally Unacceptable	Clearly Unacceptable
Residential – Low Density	50 to 60	60 to 70	70 to 75	75 to 85
Residential – Multiple Family	50 to 65	65 to 70	70 to 75	75 to 85
Transient Lodging—Motels, Hotels	50 to 65	65 to 70	70 to 80	80 to 85
Schools, Libraries, Churches, Hospitals, Nursing Homes	50 to 60	60 to 65	65 to 80	80 to 85
Auditoriums, Concert Halls, Amphitheatres	NA	50 to 70	NA	70 to 85
Sports Arena, Outdoor Spectator Sports	NA	50 to 75	NA	75 to 85
Playgrounds, Neighborhood Parks	50 to 67.5	NA	70 to 80	75 to 85
Golf Courses, Riding Stables, Water Recreation, Cemeteries	50 to 75	NA	70 to 80	80 to 85
Office Buildings, Business and Professional Commercial	50 to 67.5	67.5 to 77.5	77.5 to 85	NA
Industrial, Manufacturing, Utilities, Agriculture	50 to 70	70 to 80	80 to 85	NA

Normally Acceptable: Specified land use is satisfactory, based upon the assumption that any buildings involved are of normal conventional construction without any special noise insulation requirements.

Conditionally Acceptable: New construction or development should be undertaken only after a detailed analysis of the noise reduction requirements is made and needed noise insulation features included in the design. Conventional construction, but with closed windows and fresh air supply systems or air conditioning will normally suffice.

Normally Unacceptable: 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.

Clearly Unacceptable: New construction or development should generally not be undertaken.

NA: Not Applicable

SOURCE: Modified from California Office of Planning and Research, n.d. Guidelines for the Preparation and Content of the Noise Element of the General Plan.

In addition, new or renovated residential and business buildings in California will need to comply with the California Code of Regulations, Title 24 – Building Energy Efficiency Standards, which require that interior noise levels attributable to exterior sources must not exceed 45 dB in any habitable room.

**TABLE 3.11-5
STATE INTERIOR AND EXTERIOR NOISE STANDARDS**

Land Use Categories		CNEL dBA	
Categories	Uses	Interior ¹	Exterior ²
Residential	Single-Family, Duplex, Multiple-Family	45 ³	65
	Mobile Home	--	65 ⁴
Commercial	Hotel, Motel, Transient Lodging	45	--
Industrial	Commercial Retail, Bank, Restaurant	55	--
Institutional	Office Building, Research and Development, Professional Offices, City Office Building	50	--
	Amphitheater, Concert Hall, Auditorium, Meeting hall	45	--
	Gymnasium (Multipurpose)	50	--
	Sports Club	55	--
	Manufacturing, Warehousing, Wholesale, Utilities	65	--
	Movie Theaters	45	--
	Hospital, Schools' Classrooms/Playgrounds	45	65
Open Space	Church, Library	45	--
	Parks	--	65

¹ Indoor environmental including: Bathrooms, closets, and corridors.

² Outdoor environment limited to

- Private yard of single family, multi-family private patio or balcony which is served by a means of exit from inside the dwelling
- Balconies 6 feet deep or less are exempt
- Mobile home park
- Park's picnic area
- School's playground

³ Noise level requirement with closed windows. Mechanical ventilating system or other means of natural ventilation shall be provided as of Chapter 23, Section 1206 of UBC.

⁴ Exterior noise levels should be such that interior noise levels will not exceed 45 dBA CNEL.

SOURCE: Modified from California Department of Health Services, Office of Noise Control.

Local

City of Carson Noise Element

The Noise Element of the 2004 Carson General Plan establishes noise guidelines for the City. These guidelines are based in part on the community noise compatibility guidelines established by the California State Governor's Office of Planning and Research and are intended for use in assessing the compatibility of various land use types with a range of noise levels.¹⁸ **Table 3.11-6, *City of Carson Guidelines for Noise Compatible Land Use***, provides the guidelines of land use compatibility for community noise sources. The CNEL noise levels for specific land uses are classified into four categories: (1) "normally acceptable" (2) "conditionally acceptable" (3) "normally unacceptable" and (4) "clearly unacceptable." A CNEL value of 65 dBA is considered

¹⁸ California Office of Planning and Research, 2020. General Plan Guidelines and Technical Advisors, Appendix D: Noise Element Guidelines.

the dividing line between a “conditionally acceptable” and “normally unacceptable” noise environment for noise sensitive land uses, including residences, and schools. A CNEL value of 70 dBA is considered the dividing line between a “normally acceptable” and “normally unacceptable” noise environment for noise sensitive land uses, including neighborhood parks.

**TABLE 3.11-6
 CITY OF CARSON GUIDELINES FOR NOISE COMPATIBLE LAND USE**

Land Use Categories	Community Noise Exposure (CNEL, dB)			
	Normally Acceptable	Conditionally Acceptable	Normally Unacceptable	Clearly Unacceptable
Residential – Low Density	50–60	60–65	65–75	75–85
Residential Multi-Family	50–60	60–65	65–75	75–85
Transient Lodging, Hotel, Motel	50–65	65–70	70–80	80–85
School, Library, Church, Hospital, Nursing Home	50–60	60–65	65–80	80–85
Auditorium, Concert Hall, Amphitheater	N/A	50–65	N/A	65–85
Sports Arena, Outdoor Spectator Sports	N/A	50–70	N/A	70–85
Playground, Neighborhood Park	50–70	N/A	70–75	75–85
Golf Course, Riding Stable, Water Recreation, Cemetery	50–70	N/A	70–80	80–85
Office Building, Business, Commercial, Professional	50–67.5	67.5–75	75–85	N/A
Agriculture, Industrial, Manufacturing, Utilities	50–70	70–75	75–85	N/A

Based on the Governor’s Office of Planning and Research, “General Plan Guidelines,” 1990. To help guide determination of appropriate land use and mitigation measures vis-a-vis existing or anticipated ambient noise levels.

A = Normally Acceptable: Specified land use is satisfactory, based upon the assumption buildings involved are conventional construction, without any special noise insulation.

C = Conditionally Acceptable: New construction or development only after a detailed analysis of noise mitigation is made and needed noise insulation features are included in project design. Conventional construction, but with closed windows and fresh air supply systems or air conditioning will suffice.

N = Normally Unacceptable: New construction or development generally should be discouraged. A detailed analysis of the noise reduction requirements must be made and noise insulation features included in the design of a project.

U = Clearly Unacceptable: New construction or development should generally not be undertaken.

SOURCE: City of Carson, 2002. General Plan Noise Element.

City of Carson Municipal Code, Noise Ordinance

Article IV, Public Peace, Chapter 1, Prohibited Conduct – Offenses, Section 4101, Unnecessary Noises, of the Carson Municipal Code , controls any disturbing, excessive or offensive noise which causes discomfort or annoyance to any reasonable person of normal sensitivity residing in the community.

In 1995, Carson adopted the “Noise Control Ordinance of the County of Los Angeles,” as amended, as the City’s Noise Control Ordinance. The adopted Noise Ordinance sets standards for noise levels citywide and provides the means to enforce the reduction of obnoxious or offensive noise. The noise sources enumerated in the Noise Ordinance include radios, phonographs, loudspeakers and amplifiers, electric motors or engines, animals, motor vehicles and construction equipment. The Noise Ordinance sets interior and exterior noise levels for all properties within

designated noise zones, unless exempted, as shown in **Table 3.11-7, City of Carson Noise Ordinance Standards**. Enforcing the Noise Ordinance includes requiring proposed development projects to show compliance with the ordinance and requiring construction activity to comply with established scheduling limits. The ordinance is reviewed periodically for adequacy and amended as needed to address community needs and development patterns.

**TABLE 3.11-7
CITY OF CARSON NOISE ORDINANCE STANDARDS**

Noise Zone	Designated Noise Zone Land Use (Receptor Property)	Time Interval	Exterior Noise Level (dBA)	Interior Noise Level (dBA)
I	Noise Sensitive Area	Anytime	45	--
II	Residential Properties	10:00 P.M. to 7:00 A.M. (nighttime)	45	--
		7:00 A.M. to 10:00 P.M. (daytime)	50	--
III	Commercial Properties	10:00 P.M. to 7:00 A.M. (nighttime)	55	--
		7:00 A.M. to 10:00 P.M. (daytime)	60	--
IV	Industrial Properties	Anytime	70	--
All Zones	Multi-family Residential	10:00 P.M. to 7:00 A.M. (nighttime)	--	40
		7:00 A.M. to 10:00 P.M. (daytime)	--	45

SOURCE: County of Los Angeles County Code, Sections 12.08.490 and 12.08.400.

Article V, Sanitation and Health, Chapter 5, Noise Control Ordinance, Section 5502, Amendments to Noise Control Ordinance, of the Carson Municipal Code provides a list of amendments added to the Los Angeles County Code for application in the city of Carson. Section 5502(c) amends subsection B1 of Section 12.08.440 to address noise standards for construction activities with nearby residential land uses. Long term construction (defined as more than 21 days of scheduled work) is permitted Monday through Saturday from 7:00 a.m. to 8:00 p.m. given construction does not exceed 65 dBA in single-family residential areas, 70 dBA in multi-family residential areas, and 70 dBA in semi-residential/commercial areas. Construction noise levels take precedence over the noise standards listed in Table 3.11-7. Section 5502(h) lists amendments to the Los Angeles County Code for procedures for obtaining a variance from the requirements of City’s Noise Control Ordinance, which may be granted by the Planning Commission for a period not to exceed two years, subject to such terms, conditions and requirements as may be reasonable under the circumstances.

County of Los Angeles, Noise Element

The California Government Code Section 65302(g) requires that a noise element be included in the General Plan of each county and city in the state. The Noise Element of the County of Los Angeles General Plan is intended to provide a systematic approach to identifying and appraising noise problems in the community; quantifying existing and projected noise levels; addressing excessive noise exposure; and community planning for the regulation of noise.

The County does not set land use standards for noise in its Noise Element of the General Plan. Therefore, the 65 dBA CNEL exterior noise standard recommended for residential uses in the state’s guidelines is used in this noise impact analysis.

County of Los Angeles Municipal Code, Noise Ordinance

Los Angeles County Code, Chapter 12.08 Noise Control, has the following exterior noise standards listed in **Table 3.11-8, Exterior Noise Standards.**

**TABLE 3.11-8
 EXTERIOR NOISE STANDARDS, L₅₀**

Noise Zone	Designated Noise Zone Land Use	Time Interval	Exterior Noise Level (dBA)
I	Noise Sensitive Area	Anytime	45
II	Residential Area	10:00 p.m. to 7:00 a.m.	45
		7:00 a.m. to 10:00 p.m.	50
III	Commercial Area	10:00 p.m. to 7:00 a.m.	55
		7:00 a.m. to 10:00 p.m.	60
IV	industrial Area	Anytime	70

SOURCE: County of Los Angeles County Code, Section 12.08.390.

The above noise level limits may not be exceeded for a cumulative period of more than 30 minutes in any hour. If the existing ambient L₅₀ exceeds these levels, then the ambient L₅₀ becomes the exterior noise levels. For events shorter than 30 minutes, higher noise limits are used for the exterior noise standards. For example, 5, 10, and 15 dBA are added to the above noise limits for events less than 15, 5, and 1 minutes, respectively. Twenty dBA plus the above noise limits (70 dBA L_{max} during the day and 65 dBA L_{max} during the night) may not be exceeded for any period of time.

For interior noise standards, the County sets an allowable interior noise level of 45 dBA for the period from 7:00 a.m. to 10:00 p.m. and 40 dBA for the period from 10:00 p.m. to 7:00 a.m. for all multifamily residential uses. For events shorter than 5 minutes in any hour, the noise standard is increased in 5 dBA increments in each standard. For example, 5 and 10 dBA are added to these noise limits for events less than 5 minutes and 1 minute, respectively. If the measured ambient noise reflected by the L₅₀ exceeds that permissible within any of the interior noise standards, the allowable interior noise level shall be increased in 5 dBA increments in each standard, as appropriate, to reflect said ambient noise level.

The County also has the following construction noise restrictions:

- A. Operating or causing the operation of any tools or equipment used in construction, drilling, repair, alteration or demolition work between weekday hours of 7:00 p.m. and 7:00 a.m., or at

any time on Sundays or holidays, such that the sound there from creates a noise disturbance across a residential or commercial real-property line, except for emergency work of public service utilities or by variance issued by the health officer is prohibited.

B. Noise Restrictions at Affected Structures. The contractor shall conduct construction activities in such a manner that the maximum noise levels at the affected buildings will not exceed those listed in the following schedule:

1. At Residential Structures.

a. Mobile Equipment. Maximum noise levels for nonscheduled, intermittent, short-term operation (less than 10 days) or of mobile equipment:

	Single-family Residential	Multi-family Residential	Semiresidential/ Commercial
Daily, except Sundays and legal holidays, 7:00 a.m. to 8:00 p.m.	75dBA	80dBA	85dBA
Daily, 8:00 p.m. to 7:00 a.m. and all day Sunday and legal holidays	60dBA	64dBA	70dBA

b. Stationary Equipment. Maximum noise level for repetitively scheduled and relatively long-term operation (periods of 10 days or more) of stationary equipment:

	Single-family Residential	Multi-family Residential	Semiresidential/ Commercial
Daily, except Sundays and legal holidays, 7:00 a.m. to 8:00 p.m.	60dBA	65dBA	70dBA
Daily, 8:00 p.m. to 7:00 a.m. and all day Sunday and legal holidays	50dBA	55dBA	60dBA

2. At Business Structures.

a. Mobile equipment. Maximum noise levels for nonscheduled, intermittent, short-term operation of mobile equipment:

Daily, including Sunday and legal holidays, all hours: maximum of 85dBA.

C. All mobile or stationary internal-combustion-engine powered equipment or machinery shall be equipped with suitable exhaust and air-intake silencers in proper working order.

D. In case of a conflict between this chapter and any other ordinance regulating construction activities, provisions of any specific ordinance regulating construction activities shall control.

For planning purposes, the 24-hour average sound levels (CNEL) are roughly equivalent to L_{eq} measurements plus 5 dBA when traffic is the dominant noise source.¹⁹

¹⁹ California Department of Health Services, Office of Noise Control, 1976:21.

3.11.4 Existing Noise Environment

Carson's noise environment is dominated by vehicular traffic including vehicular generated noise along Interstate 405 (I-405), Interstate 110 (I-110), Interstate 710 (I-710), and State Route 91 (SR-91), and primary and major arterial roadways. Additionally, the Compton, Long Beach, and Los Angeles International Airports, as well as railroad operations within the city, contribute to the overall noise environment. Furthermore, a number of other sources contribute to the total noise environment such as construction activities, power tools, industrial operations, gardening equipment, loudspeakers, auto repair, radios, children playing, and dogs barking. In order to provide a description of the existing noise environment in Carson, field noise measurements were taken in 2017 at various locations in the city to reflect ambient noise levels primarily in the vicinity of sensitive uses (i.e., schools, residences, churches, hospitals, etc.). Existing traffic volumes were also modeled throughout the city to provide projected vehicular generated noise levels.

Ambient Noise

To understand the existing ambient or background noise levels throughout the city, long-term (24-hour) and short-term (15-minute) field measurements were conducted in December 2017. The noise measurements take into account mobile noise sources and stationary noise sources. Field monitoring consisted of 31 noise measurements recorded at various locations throughout the city. Heavy truck traffic was observed on many of the roadways during the field noise measurements. The noise measurements were conducted using a Larson Davis LxT sound-level meter (SLM) and Casella CEL-63X SLM. All instruments were calibrated and operated according to the applicable manufacturer specification. A summary of long-term noise measurements is shown in **Table 3.11-9, Summary of Long-Term Noise Measurements**. The results of the short-term noise measurements are shown in **Table 3.11-10, Summary of Short-Term Noise Measurements**. The measurement locations are identified in **Figure 3.11-2, Noise Measurement Locations**.

Sensitive Receptors

A noise-sensitive receptor would be any location where excessive noise levels would interfere with an individual's normal sleeping activities, normal conversation, or ability to work. Some land uses are more sensitive to high noise levels than others, due to the usage of the occupants at these land uses. Such land uses include residential neighborhoods, hotels and motels, trailer parks, schools, churches and other places of worships, hospitals, long-term medical or mental care facilities, libraries, concert halls, and other land uses that include outdoor active uses with people spending a good amount of time periods in their outdoor areas.

**TABLE 3.11-9
SUMMARY OF LONG-TERM NOISE MEASUREMENTS**

Site	General Location of Noise Measurement	Leq dBA				CNEL dBA	Orientation/Type of Sensitive Receptor
		Daytime (7 A.M. to 10 P.M.) Hourly L _{eq}	Daytime Average Hourly L _{eq}	Nighttime (10 P.M. to 7 A.M.) Hourly L _{eq}	Nighttime Average Hourly L _{eq}		
R1	Near southeast corner of S. Main Street and Lifford Street	68–75	72	62–71	66	75	Single-family residential uses located directly north, east, and south.
R2	Near northwest corner of S. Central Avenue and E. Turmont Street	69–92	73	62–70	66	75	Single-family residential uses in every direction; Annalee Elementary School to the west
R3	Near southeast corner of E. 213th Street and S. Troyton Lane	59–65	63	61–66	64	71	Single-family residential uses located directly south and southeast
R4	Near southwest corner of S. Wilmington Avenue and E. Gladwick Street	70–77	75	67–75	71	78	Single-family residential uses located directly west
R5	Near corner of S. Wilmington Avenue and E. 220th Street	73–78	75	70–75	72	79	Single-family residential uses located directly west and southwest
R6	Near corner of S. Main Street and E. 229th Place	68–73	70	59–68	64	72	Single-family residential uses in every direction

¹ Detailed measured noise data, including hourly L_{eq} levels, are included in Appendix E.

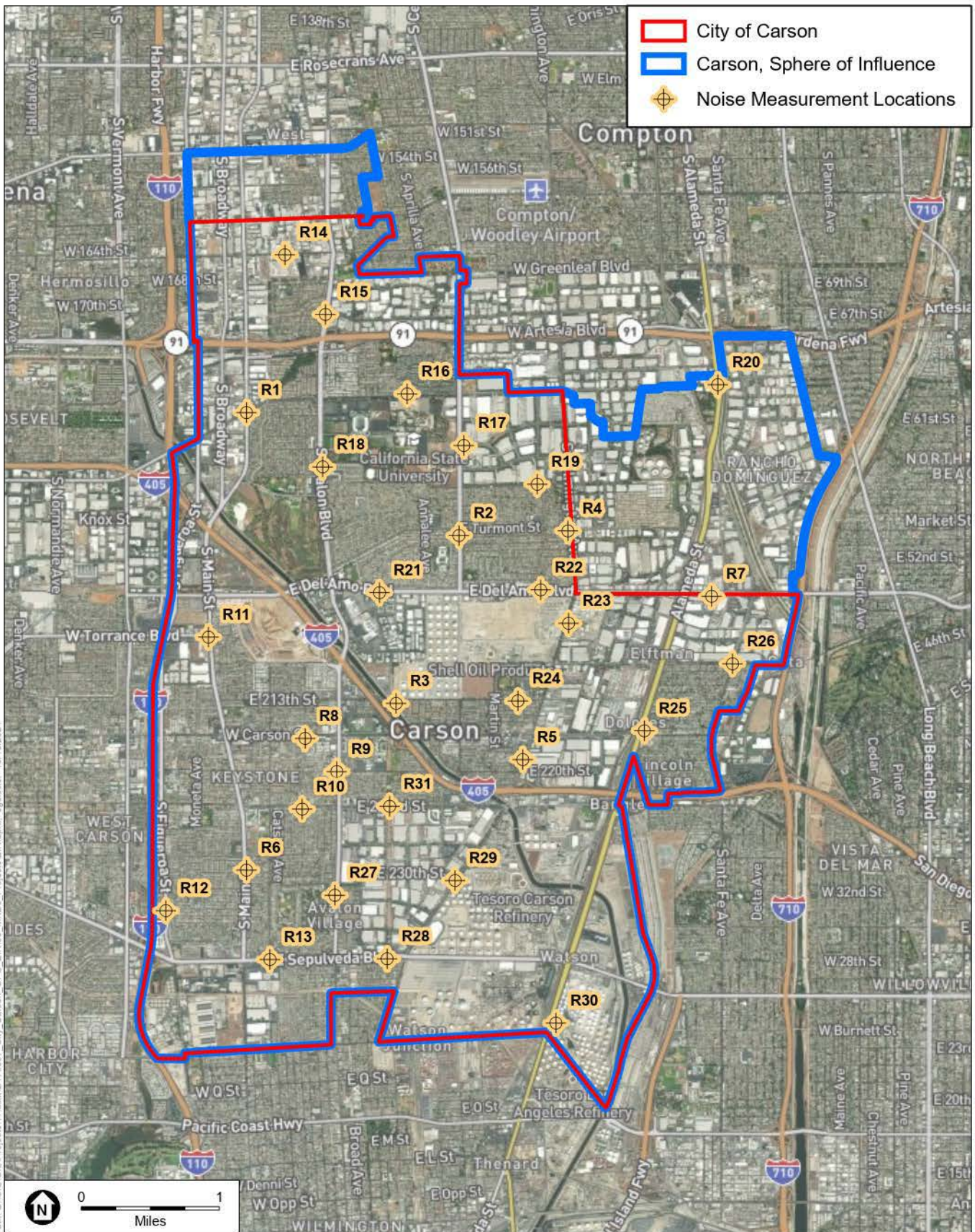
SOURCE: Prepared by Environmental Science Associates based on Appendix E and Federal Transit Administration, 2018. *Transit Noise and Vibration Impact Assessment Manual*. September..

**TABLE 3.11-10
SUMMARY OF SHORT-TERM NOISE MEASUREMENTS**

Site	General Location of Noise Measurement	dBA Leq	Orientation/Type of Sensitive Receptor
R7	E. Del Amo Boulevard near Alameda Street Ramps	74.3	None
R8	Near southeast corner of E. Carson Street and Grace Avenue	66.3	Multi-family residential uses along E. Carson Street and single- and multi-family residential uses along Grace Avenue
R9	Near southeast corner of N. Avalon Boulevard and E. 220th Street	69.6	Single- and multi-family residential uses along Avalon Boulevard and E. 220th Street
R10	Near northwest corner of Grace Avenue and E. 223rd Street	71.0	Single-family residential uses along Grace Avenue and E. 220th Street
R11	Near northeast corner of S. Main Street and W. Torrance Boulevard	70.3	Single-family residential uses along S. Main Street and W. Torrance Boulevard

Site	General Location of Noise Measurement	dBA Leq	Orientation/Type of Sensitive Receptor
R12	Near northeast corner of S. Figueroa Street and W. 234th Street	67.7	Single- and multi-family residential uses along S. Figueroa Street and W. 234th Street
R13	Near northwest corner of Dolores Street and E. Sepulveda Boulevard	73.0	Single-family residential uses along Dolores Street and E. Sepulveda Boulevard
R14	E. Gardena Boulevard between S. Main Street and S. Avalon Boulevard	68.1	None
R15	Near northeast corner of S. Avalon Boulevard and E. Walnut Street	73.0	Single-family residential uses along E. Walnut Street
R16	Near northeast corner of Cedarbluff Way and E. Victoria Street	67.1	Single- and multi-family residential uses along E. Victoria Street and Cedarbluff Way
R17	Near northeast corner of Central Avenue and Beachey Place	72.5	None
R18	Near northeast corner of S. Avalon Boulevard and Loyola Avenue	74.6	Single-family residential uses along S. Avalon Boulevard and Loyola Avenue, school uses on the east side of S. Avalon boulevard
R19	Near southwest corner of Grandee Avenue and E. University Drive	70.7	Single-family residential uses along Grandee Avenue and E. University Drive
R20	Near northwest corner of Alameda Street and Homestead Place	71.4	Museum on the west side Alameda Street
R21	Near southeast corner of Leapwood Avenue and E. Del Amo Boulevard	72.9	Single-family residential uses along E. Del Amo Boulevard and multi-family residential uses along Leapwood Avenue
R22	Near northwest corner of Alvo Avenue and E. Del Amo Boulevard	74.7	Single-family residential uses along E. Del Amo Boulevard and Alvo Avenue
R23	Near Eco Services along S. Wilmington Avenue	73.0	None
R24	Near northeast corner of Water Street and E. 213th Street	62.6	Single-family residential uses along Water Street and E. 213th Street and school at the northeast corner of Water Street and E. 213th Street
R25	Near northeast corner of Alameda Street and E. Washington Street	73.2	Single- and multi-family residential uses along E. Washington Street
R26	Near southwest corner of Santa Fe Avenue and E. Dominguez Street	63.8	Single-family residential uses along Santa Fe Avenue and E. Dominguez Street
R27	Near southwest corner of S. Avalon Boulevard and Bayport Street	68.6	Single- and multi-family residential uses along S. Avalon Boulevard and Bayport Street
R28	Near southwest corner of Bonita Street and E. Sepulveda Boulevard	70.6	Single-family residential uses along E. Sepulveda Boulevard
R29	Near southwest corner of S. Wilmington Avenue and E 230th Street	76.0	None
R30	Near corner of Alameda Street and Lomita Boulevard	80.3	None
R31	Near northwest corner of Cluff Street and E. 223rd Street	69.7	Single-family residential uses along Cluff Street and E. 223rd Street

SOURCE: Prepared by Environmental Science Associates based on Appendix E and Federal Transit Administration, 2018. *Transit Noise and Vibration Impact Assessment Manual*. September.



SOURCE: ESA, 2021.

Carson General Plan Update

Figure 3.11-2
Noise Measurement Locations



Noise Sources

Roadway Noise

The city is exposed to vehicular traffic along the I-405, I-110, I-710, and SR-91. Existing roadway noise levels were calculated for 42 roadway segments located in the city, using the Federal Highway Administration’s (FHWA’s) Highway Traffic Noise Model (TNM) and existing peak hour traffic volumes at the study intersections, collected by Fehr & Peers in 2021 (see Appendix F2 of this Draft EIR for traffic data). TNM calculates the average noise level at specific locations based on traffic volumes, average speeds, and site environmental conditions.

The model assumed “hard surface” site propagation conditions. Sound levels caused by line sources, relatively long, variable or moving sound sources such as traffic, decrease at a rate of 3.0 to 4.5 dBA when the distance from the centerline of the road is doubled, depending on the surface hardness between the source and the receiving property. The actual sound level at any receptor location is dependent upon such factors as the source-to-receptor distance and the presence of intervening structures, barriers, and topography. Attenuation due to intervening structures, topography, atmospheric absorption, etc. is not included in the generalized model; therefore, the model analysis assumes a conservative worst-case scenario for traffic noise (i.e., actual site attenuation would potentially result in reduced traffic noise levels at receptors, where intervening structures and topography occur).

The average daily noise levels along these roadway segments at 50 feet from the roadway centerline, and the line-of-sight distance from the roadway segment to the noise contours of 70, 65, and 60 dBA CNEL are presented in **Table 3.11-11, Existing Roadway Noise Levels**. Existing roadway noise contours are shown in **Figure 3.11-3, Existing Roadway Noise Contour Map**. A noise contour is a line behind which the noise level does not exceed a certain value. For instance, the 60 dBA CNEL contour indicates that the CNEL between the roadway centerline and the contour line is equal to, or greater than 60 dBA; the CNEL beyond the contour line – away from the street – is less than 60 dBA CNEL.

**TABLE 3.11-11
 EXISTING ROADWAY NOISE LEVELS**

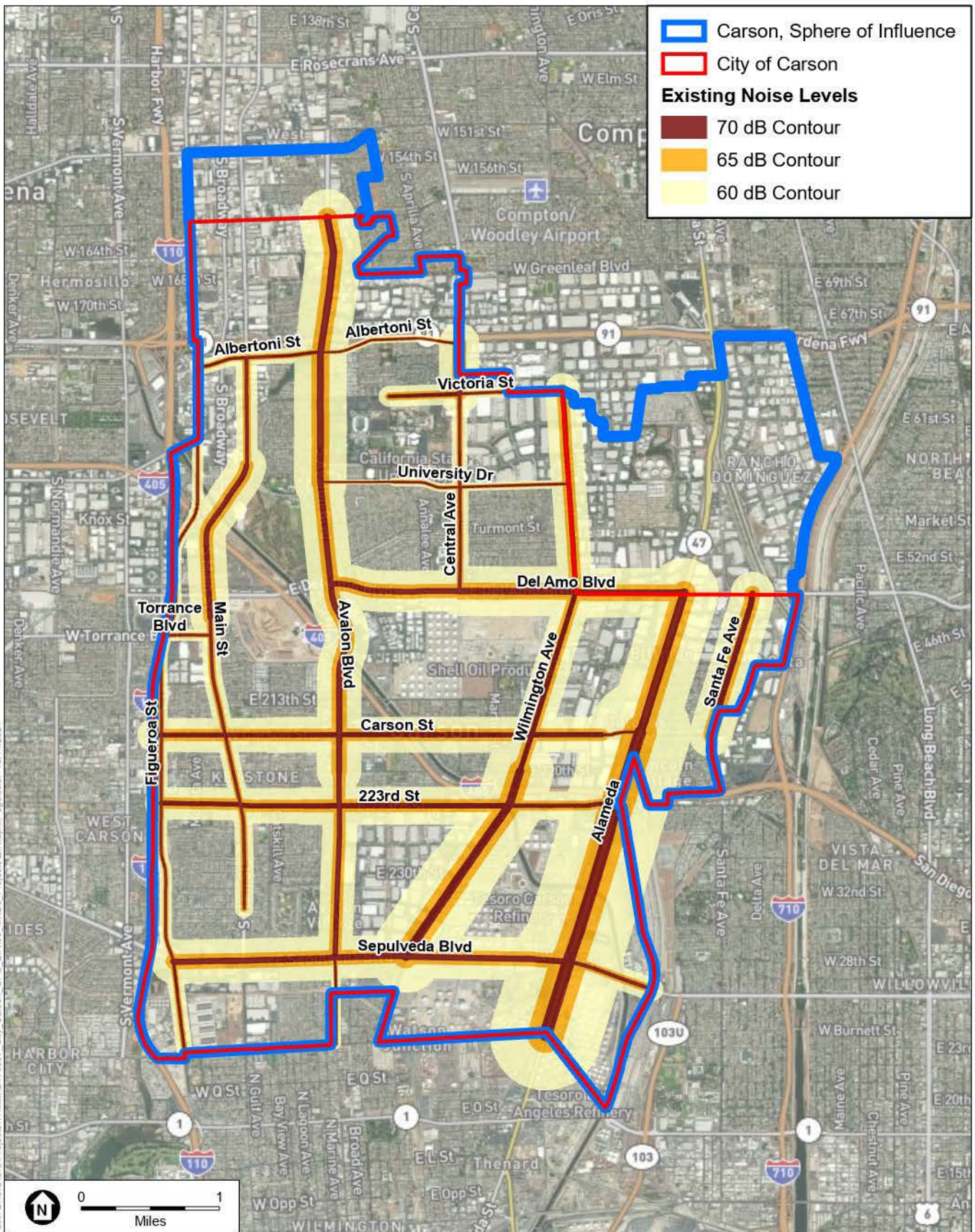
Roadway Segment	dBA CNEL at 50 Feet from Centerline ¹	Approximate Distance to CNEL Contour (feet) ²		
		60	65	70
223rd St between Alameda St and Wilmington Ave	69.9	495	155	50
223rd St between Wilmington Ave and Grace Ave	71.4	685	215	70
223rd St between Grace Ave and Main St	71.1	640	200	65
223rd St between Main St and Figueroa St	70.7	585	185	60
Alameda St between Del Amo Blvd and Carson St	74.1	1,285	405	130
Alameda St between Carson St and Sepulveda Blvd	75.8	1,905	600	190
Alameda St S/O Sepulveda Blvd	76.2	2,090	660	210
Albertoni St between Figueroa St and Avalon Blvd	67.0	250	80	25
Albertoni St between Avalon Blvd and Central Ave	63.2	105	35	10
Avalon Blvd between Walnut St and Alondra Blvd	73.1	1,025	325	105

Roadway Segment	dBA CNEL at 50 Feet from Centerline ¹	Approximate Distance to CNEL Contour (feet) ²		
		60	65	70
Avalon Blvd between Walnut and University Dr	72.9	970	305	95
Avalon Blvd between University Dr and 220th St	72.1	815	260	80
Avalon Blvd between 220th St and Sepulveda Blvd	71.0	625	200	65
Avalon Blvd between Sepulveda Blvd and Lomita Blvd	64.6	145	45	15
Carson St W/O Figueroa St	70.7	590	185	60
Carson St between Figueroa St and Dolores St	70.9	615	195	60
Carson St between Dolores St Arnold Center Dr	71.2	650	205	65
Carson St between Arnold Center Dr and Alameda St	65.4	175	55	15
Central Ave between Albertoni St and Victoria St	71.7	735	235	75
Central Ave between Victoria St and University Dr	67.1	255	80	25
Central Ave between University Dr and Del Amo Blvd	67.6	290	90	30
Del Amo Blvd between Avalon Blvd and Central Ave	71.8	755	240	75
Del Amo Blvd between Central Ave and Alameda St	72.6	910	285	90
Figueroa St between Victoria St and Del Amo Blvd	65.6	180	55	20
Figueroa St between Del Amo Blvd and Sepulveda Blvd	66.0	200	65	20
Figueroa St between Sepulveda Blvd and Lomita Blvd	67.2	265	85	25
Main St between 234th St and Vista Del Loma	68.0	315	100	30
Main St Between Vista Del Loma and Griffith St	71.5	715	225	70
Main St between Griffith St and Albertoni St	68.7	370	115	35
Santa Fe Ave between Carson St and Del Amo Blvd	72.0	790	250	80
Sepulveda Blvd E/O Alameda St Connector	69.1	405	130	40
Sepulveda Blvd between Avalon Blvd and Alameda St	71.9	780	245	80
Sepulveda Blvd between Figueroa St and Avalon Blvd	72.1	805	255	80
Torrance Blvd between Figueroa St and Main St	65.9	195	60	20
University Dr between Avalon Blvd and Perimeter Rd	60.5	55	20	5
University Dr between Perimeter Rd and Wilmington Ave	63.9	125	40	10
Victoria St between Tamcliff Ave and Central Ave	68.6	360	115	35
Victoria St between Central Ave and Wilmington Ave	65.0	160	50	15
Wilmington Ave between Victoria St and Dominguez St	71.0	625	200	65
Wilmington Ave between Dominguez St and 220th St	71.2	660	210	65
Wilmington Ave between 220th St and 230 St	74.0	1,250	395	125
Wilmington Ave between 230th St and Sepulveda Blvd	74.3	1,345	425	135

¹ CNEL values are calculated at 50 feet from the roadway centerline.

² All distances are measured from the centerline.

SOURCE: Prepared by Environmental Science Associates based on Appendix F2.



SOURCE: ESA, 2021.

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Figure 3.11-3
Existing Roadway Noise Contour Map



60 dBA CNEL Contour

The 60 dBA CNEL contour defines the noise study zone. The noise environment for any proposed noise-sensitive land use (for example, single- or multi-family residences, hospitals, schools, or churches) within this zone should be evaluated on a project-specific basis. The project may require mitigation to meet city and/or state (Title 24) standards. A site- and project-specific study will be necessary to determine mitigation measures that will help make the interior building environment acceptable for the given type of land use. Some sites may already be sufficiently protected by existing walls or berms so that no further mitigation measures are required.

65 dBA CNEL Contour

The 65 dBA CNEL contour defines the noise mitigation zone. Within this contour, new or expanded noise-sensitive developments should be permitted only if appropriate mitigation measures, such as barriers or additional sound insulation, are included and City and/or state noise standards are achieved. In some instances, it may be possible to show that existing walls, berms, or screening may exist such that required noise reduction is already in place. The inclusion of an area within a 60 or 65 dBA CNEL contour as shown on Figure 3.11-3 indicates that noise levels are high enough to be of potential concern, but does not imply that excessive noise levels are uniformly present on all sites within the area. Buildings, walls, berms, and changes in topography affect noise levels at the receiver site. Some locations may be screened from roadway noise by the presence of one or more of these features. As indicated in Table 3.11-11, the existing roadway noise levels at 50 feet along studied roadways vary from a minimum of 60.5 dBA CNEL to a maximum of 76.2 dBA CNEL. As indicated in the Table 3.11-11, the 65 dBA CNEL contour locations vary from 20 feet (along University Drive between Avalon Boulevard and Perimeter Road) to 660 feet (along Alameda Street south of Sepulveda Boulevard) from the roadway centerline. For all of these roadway links, the 65 dBA CNEL contours extend beyond the edge of right-of-way (ROW).

70 dBA CNEL Contour

The 70 dBA CNEL contour defines the noise impact zone. Within this contour, new or expanded noise-sensitive developments are usually not permitted. The development of an area within a 70 dBA CNEL contour as shown on Figure 3.11-3 indicates that noise levels are high enough to be of potential concern. As indicated in Table 3.11-11, the existing roadway noise levels at 50 feet along studied roadways vary from a minimum of 60.5 dBA CNEL to a maximum of 76.2 dBA CNEL. As indicated in the Table 3.11-11, the 70 dBA CNEL contour locations vary from 5 feet (along University Drive between Avalon Boulevard and Perimeter Road) to 210 feet (along Alameda Street south of Sepulveda Boulevard) from the roadway centerline. For the majority of these roadway links, the 70 dBA CNEL contours extend beyond the edge of right-of-way ROW.

Railroad Noise

There are railroad tracks along the eastern portion of the city, generally following Alameda Street and are used primarily for the transport of cargo containers from the Ports of Los Angeles and Long Beach to inland warehouses or to out of state destinations. The residential neighborhood of Lincoln Village in the southeastern corner of the city is impacted by the train noise along these

railroad tracks. Freight trains usually generate higher noise levels than passenger trains, but do not operate on a fixed schedule.

Aircraft Noise

There is currently no airport or private airstrip within the city of Carson. Compton Airport is located approximately one-half mile to the northwest of the city while the Long Beach International and Los Angeles International airports are located approximately 13 miles and 12.7 miles to the southeast and the northwest of the city, respectively. The city is affected by the overflight of airplanes from these airports, but is not within the 60 dBA CNEL noise contours of any of these airports, which would trigger the need for a noise assessment for proposed sensitive uses.

Stationary Noise

Industrial Noise

Industrial uses are spread out across the entire city, from the northwest corner to the north, northeast, east, and to the southeast. The Sanitation District of Los Angeles County and some industrial uses are located in the southwest corner of the city. Major noise generating sources from industrial uses include heavy duty trucks, loading/unloading activities, and generators that typically occur outdoors. Stationary sources of noise are required to comply with the Carson Municipal Code noise control ordinance.

Commercial and Residential Noise

The city's residential neighborhoods generally are located in the central and western portions of the city, except the Lincoln Village neighborhood, which is located in the southeastern portion of the city, east of Alameda Street and the railroad tracks.

Commercial uses are spread out and mixed with the residential neighborhoods. Major noise generating noise sources include loading/unloading activities associated with commercial uses, trash collection, and other noise-generating activities occurring outdoors. Stationary sources of noise are required to comply with the Carson Municipal Code noise control ordinance.

3.11.5 Project Impact Analysis

Thresholds of Significance and Methodology

Thresholds of Significance

Appendix G of the State CEQA Guidelines provides screening questions that address potential impacts related to a number of environmental issues. The CEQA guidelines provides that lead agencies may use the questions set forth in the Appendix G to assess the significance of a project's environmental effects, and the use of Appendix G as a significance threshold is routinely sanctioned by the courts (although such use is not mandatory). Based on the Appendix G questions regarding noise, a project would have a significant impact if the project would result in:

Threshold NOI-1: Generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies;

Threshold NOI-2: Generation of excessive groundborne vibration or groundborne noise levels; or

Threshold NOI-3: 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 project expose people residing or working in the project area to excessive noise levels.

Methodology

Construction Noise and Vibration

For project-related construction noise, typical construction equipment noise levels recommended for noise impact assessments, based on a distance of 50 feet between the equipment and a noise receptor, are taken from the FHWA Roadway Construction Noise Model (RCNM).²⁰

Construction vibration impacts were evaluated using FTA methodology from the FTA Transit Noise and Vibration Impact Assessment Manual.²¹ Setback distances for preventing vibration damage were evaluated using reference vibration levels for specific construction equipment.

Traffic Noise

During operation of the project, noise generated from mobile noise sources such as vehicular traffic is assessed with the FHWA-approved traffic noise source noise modeling guidelines. For stationary sources, equipment source noise levels included in the FHWA RCNM are used for the impact analysis.²²

Railway Noise

This analysis evaluates impacts associated with the proposed General Plan update at the program level. Accordingly, specific details on future railway expansions or improvements are unknown at this time, neither are the specific noise sources that might occur in conjunction with development of land uses near the railway under the Project. Therefore, railway noise and vibration impacts are discussed on a qualitative basis.

Stationary Noise

This analysis evaluates impacts associated with the proposed General Plan update at the program level. Accordingly, specific details on future mechanical equipment or HVAC equipment and layout are unknown at this time, neither are the specific noise sources that might occur in conjunction with development of land uses allowable under the Project. Therefore, stationary and other noise source impacts are discussed on a qualitative basis.

²⁰ FHWA, 2006. Roadway Construction Noise Model User's Guide, January.

²¹ FTA, 2018. *Transit Noise and Vibration Impact Assessment Manual*, September.

²² FHWA, 2006. Roadway Construction Noise Model User's Guide, January.

Project Impact Analysis

Temporary or Permanent Increase in Ambient Noise Levels

Threshold NOI-1: The Project would have a significant impact if future development allowed by Carson2040 would generate a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies.

Impact NOI-1: *The Project would not result in the generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies. (Less than Significant)*

Construction Noise

Construction of future development under the proposed General Plan update would require the use of heavy equipment during the demolition, grading, excavation, and other construction activities within the Planning Area. During each stage of development for any given construction project, a different mix of equipment would be used. As such, construction activity noise levels would fluctuate depending on the particular type, number, and duration of use of the various pieces of construction equipment.

Individual pieces of construction equipment expected to be used during construction could produce maximum noise levels of 75 dBA to 101 dBA Lmax at a reference distance of 50 feet from the noise source, as shown in **Table 3.11-12, Construction Equipment Noise Levels**. These maximum noise levels would occur when equipment is operating at full power. The estimated usage factor for the equipment is also shown in Table 3.11-13. The usage factors are based on FHWA's RCNM User's Guide.²³

The exact locations of future projects and construction that would be implemented under the proposed General Plan update are not known at this time, though it is assumed that some of the activities would take place in close proximity to sensitive receptors given that the Planning Area includes a wide range of receptors. The severity of construction-related noise impacts depends on the proximity of construction activities to sensitive receptors, the presence of intervening barriers, the number and types of equipment used, and the duration of the activity. While the details of these factors are not available for future projects under the proposed General Plan update, it is assumed that individual projects would be implemented in compliance with the City standards. Future development under the proposed General Plan update would be required to comply with the restrictions of the Carson Municipal Code. In addition, future development under the proposed General Plan update would be required to conduct their own CEQA analysis and would determine significance based on the individual project specifics. Through each project's individual environmental review process, potential impacts would be identified and compared against relevant thresholds. Individual projects that exceed the thresholds would normally result in a potentially significant impact and require mitigation. Therefore, the impact from construction noise would be less than significant.

²³ FHWA, 2006. Roadway Construction Noise Model User's Guide, January.

**TABLE 3.11-12
CONSTRUCTION EQUIPMENT NOISE LEVELS**

Construction Equipment	Estimated Usage Factor	Noise Level at 50 Feet (dBA Lmax)
Air Compressors	40%	78
Bore/Drill Rig	20%	79
Cement and Mortar Mixer	40%	79
Compactor	20%	83
Concrete Saw	20%	90
Crane	16%	81
Dumpers/Tenders	40%	76
Excavator	40%	81
Forklift	10%	75
Generator Sets	50%	81
Jackhammers	20%	89
Off-Highway Trucks	20%	76
Other Equipment	50%	85
Paver	50%	77
Paving Equipment	20%	90
Roller	20%	80
Rough Terrain Forklift	10%	75
Rubber Tired Loader	50%	79
Surfacing Equipment	50%	85
Tractor/Loader/Backhoe	25%	80
Vacuum Street Sweeper	10%	82
Vibratory Pile Driver	20%	101

SOURCE: Federal Highway Administration, 2006. *Roadway Construction Noise Model User's Guide*. January.

Traffic Noise

Future development under the proposed General Plan update would generate traffic that would increase noise levels along existing and future roadways. The FHWA's FHWA-TNM was used to evaluate future (2040) traffic-related noise conditions in the city and SOI at the study intersections. The model calculates the average noise level at specific locations based on traffic volumes, average speeds, and site environmental conditions. **Table 3.11-13, Future Roadway Noise Levels**, provides the future buildout noise levels at 50 feet from the centerline of these roadway segments and the distances to the 60, 65, and 70 dBA CNEL future roadway noise contours shown in **Figure 3.11-4, Future Roadway Noise Contour Map**. As shown in Table 3.11-13, traffic noise along the analyzed roadway segments would not be discernably different when existing noise levels are compared to future roadway noise levels with implementation of the proposed General Plan update. The maximum increase would 2.5 dBA be along Figueroa

Street between Victoria Street and Del Amo Boulevard. A 3 dBA increase in noise levels is considered barely perceivable by the human ear. Therefore, the impact from traffic noise would be less than significant.

**TABLE 3.11-13
 FUTURE ROADWAY NOISE LEVELS**

Roadway Segment	Future Plus Project Distance (feet) to Centerline to			Future No Project Noise Levels	Future Plus Project Noise Levels	Increase
	60 dBA CNEL Contour	65 dBA CNEL Contour	70 dBA CNEL Contour	dBA CNEL at 50 Feet from Centerline		
223rd St between Alameda St and Wilmington Ave	780	245	80	71.8	71.9	0.2
223rd St between Wilmington Ave and Grace Ave	710	225	70	71.7	71.5	-0.2
223rd St between Grace Ave and Main St	700	220	70	71.3	71.5	0.2
223rd St between Main St and Figueroa St	640	205	65	71.0	71.1	0.1
Alameda St between Del Amo Blvd and Carson St	2,515	795	250	76.4	77.0	0.6
Alameda St between Carson St and Sepulveda Blvd	3,900	1,235	390	78.4	78.9	0.5
Alameda St S/O Sepulveda Blvd	4,380	1,385	440	79.0	79.4	0.4
Albertoni St between Figueroa St and Avalon Blvd	340	110	35	67.2	68.3	1.1
Albertoni St between Avalon Blvd and Central Ave	160	50	15	64.4	65.1	0.7
Avalon Blvd between Walnut St and Alondra Blvd	1,020	320	100	73.1	73.1	0.0
Avalon Blvd between Walnut and University Dr	1,040	330	105	72.7	73.2	0.4
Avalon Blvd between University Dr and 220th St	875	275	90	72.0	72.4	0.4
Avalon Blvd between 220th St and Sepulveda Blvd	680	215	70	71.1	71.3	0.2
Avalon Blvd between Sepulveda Blvd and Lomita Blvd	195	60	20	66.0	65.9	-0.1
Carson St W/O Figueroa St	685	215	70	71.1	71.4	0.3
Carson St between Figueroa St and Dolores St	710	225	70	71.3	71.5	0.2
Carson St between Dolores St Arnold Center Dr	670	210	65	71.3	71.3	0.0
Carson St between Arnold Center Dr and Alameda St	170	55	15	65.7	65.4	-0.3
Central Ave between Albertoni St and Victoria St	1,190	375	120	72.3	73.8	1.5
Central Ave between Victoria St and University Dr	380	120	40	67.7	68.8	1.1
Central Ave between University Dr and Del Amo Blvd	475	150	50	68.4	69.8	1.4
Del Amo Blvd between Avalon Blvd and Central Ave	885	280	90	72.1	72.5	0.4
Del Amo Blvd between Central Ave and Alameda St	1,150	365	115	73.0	73.6	0.7
Figueroa St between Victoria St and Del Amo Blvd	265	85	25	64.8	67.3	2.5
Figueroa St between Del Amo Blvd and Sepulveda Blvd	230	70	25	66.3	66.6	0.3
Figueroa St between Sepulveda Blvd and Lomita Blvd	235	75	25	66.7	66.7	0.0
Main St between 234th St and Vista Del Loma	300	95	30	67.7	67.8	0.1
Main St Between Vista Del Loma and Griffith St	945	300	95	72.2	72.8	0.6
Main St between Griffith St and Albertoni St	495	155	50	69.6	70.0	0.3

Roadway Segment	Future Plus Project Distance (feet) to Centerline to			Future No Project Noise Levels	Future Plus Project Noise Levels	Increase
	60 dBA CNEL Contour	65 dBA CNEL Contour	70 dBA CNEL Contour	dBA CNEL at 50 Feet from Centerline		
Santa Fe Ave between Carson St and Del Amo Blvd	870	275	85	72.7	72.4	-0.3
Sepulveda Blvd E/O Alameda St Connector	495	155	50	69.7	70.0	0.2
Sepulveda Blvd between Avalon Blvd and Alameda St	770	245	75	71.9	71.9	0.0
Sepulveda Blvd between Figueroa St and Avalon Blvd	875	275	90	72.4	72.4	0.0
Torrance Blvd between Figueroa St and Main St	315	100	30	66.2	68.0	1.8
University Dr between Avalon Blvd and Perimeter Rd	50	15	5	59.2	60.0	0.8
University Dr between Perimeter Rd and Wilmington Ave	115	35	10	63.3	63.7	0.4
Victoria St between Tamcliff Ave and Central Ave	355	115	35	69.0	68.5	-0.5
Victoria St between Central Ave and Wilmington Ave	105	35	10	65.8	63.3	-2.5
Wilmington Ave between Victoria St and Dominguez St	865	275	85	72.4	72.4	-0.1
Wilmington Ave between Dominguez St and 220th St	980	310	100	72.7	72.9	0.3
Wilmington Ave between 220th St and 230 St	1,780	565	180	75.2	75.5	0.3
Wilmington Ave between 230th St and Sepulveda Blvd	1,665	525	165	75.1	75.2	0.2

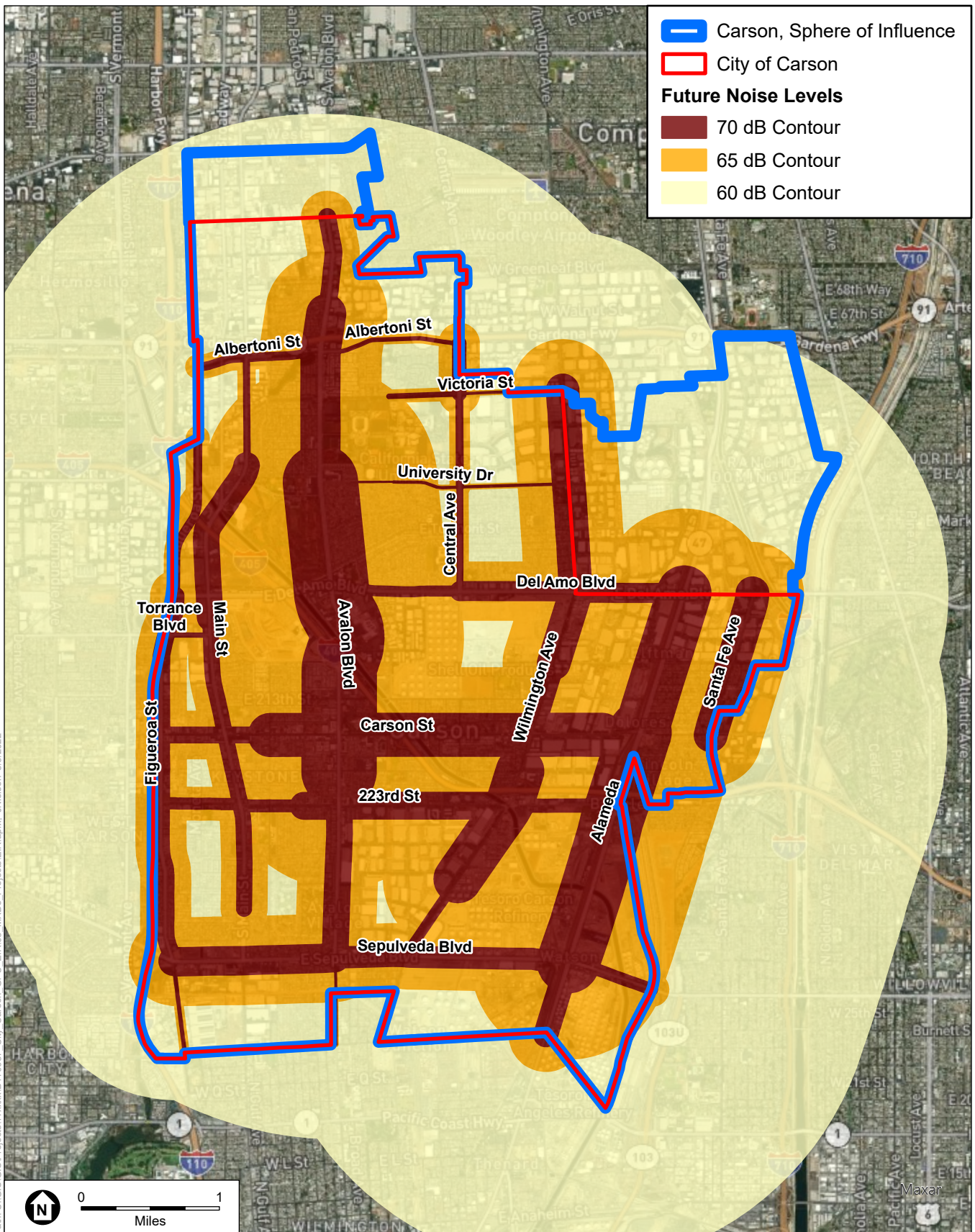
SOURCE: Prepared by Environmental Science Associates based on Appendix F2

Railway Noise

There are railroad tracks along the eastern portion of the city, generally following Alameda Street and are used primarily for the transport of cargo containers from the Ports of Los Angeles and Long Beach to inland warehouses or to out of state destinations. The residential neighborhood of Lincoln Village in the southeastern corner of the city is impacted by the train noise along these railroad tracks. Freight trains usually generate higher noise levels than passenger trains, but do not operate on a fixed schedule. New or renovated noise-sensitive uses proposed in the Lincoln Village area would be required to evaluate potential train noise level at the site. Mitigation measures designed to meet the exterior and/or interior noise standards shall be identified and implemented. Therefore, the impact from railway noise would be less than significant.

Stationary Noise

Future development under the proposed General Plan update could expose existing and new sensitive receptors to stationary noise sources, such as, rooftop heating, ventilation, and air conditioning units. In addition, growth anticipated under the Project could expose existing and new sensitive receptors to stationary noise sources associated with industrial uses. Any new development under the proposed General Plan update would be subject to the Carson Municipal Code noise control ordinance and to the proposed General Plan policies aimed at reducing noise levels from adjacent properties. Through compliance with the Carson Municipal Code noise control ordinance and proposed General Plan policies, the impact from stationary noise would be less than significant.



SOURCE: ESA, 2022

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Figure 3.11-4
Future Roadway Noise Contour Map



Proposed General Plan Policies that Address the Impact

Noise Element

Guiding Policies

- NO-G-1 Maintain healthy sound environments and protect noise-sensitive uses from excessive noise exposure.
- NO-G-2 Continue efforts to incorporate noise considerations into land use planning decisions and guide the location and design of noise-generating facilities, such as transportation and industrial facilities, to minimize the effects of noise on adjacent land uses.
- NO-G-3 Seek to reduce noise impacts along major freeways, roadways, and truck routes to improve the health of nearby inhabitants.

Implementing Policies

- NO-P-1 Use the noise and land use compatibility matrix (Table 9-1) and Future Noise Contours map (Figure 3.11-4) as criteria to determine acceptability of a land use. Seek to limit new noise-sensitive uses—including schools, hospitals, places of worship, and homes—where noise levels exceed “Normally Acceptable” or “Conditionally Acceptable” levels if alternative locations are available for the uses in the city, or impose appropriate mitigation measures to bring noise levels down to acceptable levels.
- NO-P-2 Require applicants for projects with noise exposure levels that exceed the standards listed in Table 9-1 to provide a technical analysis by a professional acoustical engineer and incorporate noise-attenuating features into site planning and architecture. With mitigation, development should meet the allowable outdoor and indoor noise exposure standards in Table 9-2, or California Building Code, whichever is stricter. When a building’s openings to the exterior are required to be closed to meet the interior noise standard, mechanical ventilation should be provided.
- NO-P-3 Where site conditions permit, require noise buffering consistent with Policy NO-P-4 for all noise generators producing noise levels greater than the maximum allowed CNEL listed in Table 9-3, especially those located near noise-sensitive development.
- NO-P-4 For aesthetic reasons, discourage the use of sound walls for noise mitigation; rather, encourage the use of project design techniques such as increasing the distance between the noise source and the noise sensitive receiver, natural berms, and use non-noise sensitive structures (e.g., a garage) to shield noise sensitive areas. If a sound wall is determined necessary to mitigate noise, discourage exclusive use of walls in excess of six feet in height and encourage use of natural barriers such as site topography or constructed earthen berms. When walls are determined to be the only feasible solution to noise mitigation, then sound walls shall be designed to limit aesthetic impacts.
- NO-P-5 Require control of new developments deemed to be noise generators through site design, building design, landscaping, hours of operation, and other techniques for such that noise at site edges do not exceed performance-based standards outlined in Table 9-3.

- NO-P-6 Work with Los Angeles Metropolitan Transportation Authority (Metro) and other service providers to ensure that transit services through the city result in minimal impacts from noise and ground-borne vibration.
- NO-P-7 Seek to mitigate noise impacts from loud noise generating uses—including industrial uses, construction activity, goods movement by train and trucking, and along freeways, major corridors, and truck routes—to surrounding non-industrial uses.
- NO-P-8 Review the City of Carson Noise Ordinance for adequacy to meet noise requirements set forth in the General Plan and amend as needed to address future community needs and development patterns.

Land use and Revitalization

Guiding Policies

- LUR-G-10 Provide lands to accommodate a wide range of light industrial uses including research and development, manufacturing, agricultural processing, and logistics near transportation corridors in areas where low- to moderate intensity operations would be sufficiently buffered.
- LUR-G-13 Ensure adequate buffers and transitions between industrial and residential land uses as sites are developed or redeveloped.
- LUR-G-14 Ensure that future industrial development is in harmony to the extent possible with adjacent residential areas. To this end, new logistics buildings must have easy access to freeways and the Alameda corridor to prevent trucks passing on truck routes next to residential areas.

Heavy trucking uses cause a significant amount of noise and vibration to residential areas, in some cases 24/7. This disproportionately impacts the health of these residents, including worsening air quality due to emissions, loud noises from the engines, and vibrations from the trucks.

Implementing Policies

- LUR-P-17 Ensure that new industrial uses in the Business Mixed-Use designation minimize adverse off site air quality, noise, or glare impacts incompatible with permitted residential.
- LUR-P-19 Provide lands to accommodate a wide range of light industrial uses including research and development, manufacturing, and agricultural processing near transportation corridors in areas where low- to moderate intensity operations would be sufficiently buffered. Logistics and other heavy trucking uses shall be limited to industrial areas that provide direct access to freeways and the Alameda corridor.
- LUR-P-22 When industrial land directly adjacent to existing or permitted residential, parks, schools or other sensitive uses is developed or intensified, require a buffer of natural vegetation, open space, berms, and trees between the new residential development and industrial land. Other operation factors, including hours of operation, traffic, noise, and air quality impacts, shall be assessed and mitigated at time of project review.

Details of this would need to be developed as part of the Zoning Code. The buffer can help ameliorate visual impacts, and prevent reduce impacts related to light and glare, and potentially noise and air quality.

- LUR-P-24 Promote the development of sites designated as Business Residential Mixed Use (BRMU) with a vibrant mix of business and residential uses that include:
- For the Shell site, require at least a minimum of 25 acres of open space, 18 of which as a centralized park or open space and seven acres along the western border of the property as a Greenway Corridor/buffer. Exact locations and acreages should be specified during project planning.
 - For the Shell site, require at least a minimum nine acres of General Commercial at the south-west corner of Del Amo Boulevard and Wilmington Avenue or at a centralized location. Other commercial uses are encouraged throughout the site as mixed-use development.
 - Encourage residential development with a range of housing types, and technology, research and development, and office uses if determined to be suitable from an environmental perspective.
 - Require development to be connected to the surroundings, with through streets, and walkable urban design patterns. See additional policies in Chapter 4: Community Character, Identity, and Design Element.
 - When housing is proposed adjacent to industrial uses, require the development of a cohesive master or specific plan to include surrounding property owners to ensure compatibility. The Shell site is required to have a similar plan to outline long-term growth of the site.

Circulation

Guiding Policies

- CIR-G-3 Manage the transportation network to minimize roadway congestion, while balancing traffic Level of Service (LOS) objectives with promoting reduction in vehicle miles traveled and considerations of community character and design.
- CIR-G-4 Encourage the development of a multimodal freight transportation system that balances the need for effective and efficient transportation of goods with the health and wellbeing of the community.

Implementing Policies

- CIR-P-10 Direct commuter traffic to move through the city primarily on arterial streets, and on collector streets as appropriate. Consider traffic calming strategies.
- CIR-P-12 Install traffic calming devices as needed and appropriate in existing neighborhoods.
- CIR-P-28 Focus truck traffic onto appropriate arterial corridors in the city by clearly marking truck routes and posting appropriate signage to provide for the effective transport of goods while minimizing negative impacts on local circulation and noise-sensitive land uses. While the City has identified truck routes (Fig 3-8), the designation of truck routes does not prevent trucks from using other roads or streets to make deliveries to individual addresses. Seeking

community input around the issue and general observation of traffic patterns as online shopping and associated deliveries increase in the future will help in developing strategies to reduce use of non-designated corridors and limit disruption and potentially regulate truck movement.

CIR-P-29 Retain and strengthen ordinances restricting trucks from residential neighborhoods, using strategies such as time-of-day restrictions.

CIR-P-30 Conduct a study reviewing truck routes that are designated adjacent to residential neighborhoods. The City of Carson will explore where truck routes are redundant or unnecessary and could be removed without negative impacts to other residential neighborhoods. Segments of truck routes adjacent to residential neighborhoods are shown in Figure 3-9.

Mitigation Measures

None required.

Excessive Groundborne Vibration or Groundborne Noise

Threshold NOI-2: The Project would have a significant impact if future development allowed by Carson2040 would generate excessive groundborne vibration or groundborne noise.

Impact NOI-2: *The Project would not generate excessive groundborne vibration or groundborne noise. (Less than Significant)*

Construction

Future development under the proposed General Plan update would generate groundborne noise and vibration near construction sites and, if sensitive receptors or land uses are adjacent to construction, there could be significant impacts. Vibration attenuates quickly, but high impact equipment such as pile drivers could cause impacts depending on the distance from the receptor or land use to the construction activity. Most construction activity does not require high impact equipment and would generate vibration mostly from bulldozers and loaded trucks. A discussion of impacts to sensitive receptors and buildings from vibration generated during construction activities is provided below.

Human Annoyance

The use of large bulldozers and loaded trucks for construction would generate the highest groundborne vibration levels on a typical construction site. **Table 3.11-14, *Summary of Construction Equipment and Activity Vibration***, lists the projected vibration level from various construction equipment expected to be used during the construction of development projects that would be allowed under the proposed General Plan update. As shown in Table 3.11-14, large bulldozers and loaded trucks would generate 87 VdB and 86 Vdb, respectively, at a reference distance of 25 feet. These levels would exceed the FTA's 78 VdB threshold at the nearest noise-sensitive receiver locations during daytime hours or the FTA's 84 VdB threshold for annoyance of occupants in residential buildings.

**TABLE 3.11-14
SUMMARY OF CONSTRUCTION EQUIPMENT AND ACTIVITY VIBRATION**

Equipment/Activity	Vibration Level (VdB)			
	At 25 Feet	Distance Attenuation	Intervening Canal ¹	Maximum Vibration Level
Buildings adjacent to the construction site (50 feet)				
Large dozers, front end loaders, grader, backhoe ²	87	9	0	78
Loaded trucks	86	9	0	77
Jackhammers, forklift	79	9	0	71

NOTES:

The FTA-recommended building damage threshold is 0.2 inch/sec or approximately 94 VdB at the receiving property structure or building.

¹ No intervening structure that would provide a damping effect on vibration.

² Large bulldozer represents the construction equipment with the highest vibration potential that would be used on site. Other equipment would result in a lower vibration when compared to that of large bulldozers.

SOURCE: Prepared by Environmental Science Associates based on Appendix E and FTA, 2018. *Transit Noise and Vibration Impact Assessment Manual*, September.

The exact locations of future projects and construction that would be implemented under the proposed General Plan update are not known at this time. The severity of construction-related vibration impacts depends on the proximity of construction activities to adjacent structures and the types of equipment used. While the details of these factors are not available for future projects under the proposed General Plan update, it is assumed that individual projects would be implemented in compliance with applicable standards. In addition, future development under the proposed General Plan update would be required to conduct their own CEQA analysis and would determine significance based on the individual project specifics. Through each project’s individual environmental review process, potential impacts would be identified and compared against relevant thresholds. Individual projects that exceed the thresholds would normally be considered significant and require mitigation. Therefore, the impact of vibration with respect to human annoyance would be less than significant.

Building Damage

The use of large bulldozers and loaded trucks for construction would generate the highest groundborne vibration levels on a typical construction site. According to the FTA, large bulldozers and loaded trucks would generate 0.089 in/sec PPV and 0.076 in/sec PPV, respectively, at a reference distance of 25 feet. Table 3.11-2, above, shows the damage threshold for Class I through IV structures ranging from reinforced concrete, steel, or timber (Class I) to buildings extremely susceptible to vibration (Class IV).²⁴ **Table 3.11-15, *Distance within Vibration Damage Criteria***, shows the minimum distance that large bulldozers and loaded trucks could operate at for Class I through IV structures without causing significant damage. Construction activities such as the use of a large bulldozer, would be required to not operate

²⁴ FTA, 2018. *Transit Noise and Vibration Impact Assessment Manual*, September.

within the distances for each structure type shown in Table 3.11-15 to avoid exceeding the vibration structural damage criteria.

**TABLE 3.11-15
 DISTANCE WITHIN VIBRATION DAMAGE CRITERIA**

Construction Equipment Type	Class I: Reinforced concrete, steel, or timber	Class II: Engineered concrete and masonry	Class III: Non-engineered timber and masonry buildings	Class IV: Buildings extremely susceptible to Vibration
	0.5 PPV (in/sec)	0.3 PPV (in/sec)	0.2 PPV (in/sec)	0.12 PPV (in/sec)
Large Bulldozer	8 feet	12 feet	15 feet	21 feet
Loaded Trucks	7 feet	10 feet	14 feet	19 feet

NOTES: PPV = peak particle volume; in/sec = inches per second

SOURCE: Federal Transit Administration, 2018. *Transit Noise and Vibration Impact Assessment*. September.

The exact locations of future projects and construction that would be implemented under the proposed General Plan update are not known at this time. The severity of construction-related vibration impacts depends on the proximity of construction activities to adjacent structures and the types of equipment used. While the details of these factors are not available for future projects under the proposed General Plan update, it is assumed that individual projects would be implemented in compliance with applicable standards. In addition, future development under the proposed General Plan update would be required to conduct their own CEQA analysis and would determine significance based on the individual project specifics. Through each project’s individual environmental review process, potential impacts would be identified and compared against relevant thresholds. Individual projects that exceed the thresholds would normally be considered significant and require mitigation. Therefore, the impact of vibration to buildings during construction would be less than significant.

Traffic

Vehicular traffic would generate groundborne vibration and under the proposed General Plan update, more land development would leave to more traffic volume. However, the vibration from vehicles is temporary and intermittent and generates up to 61 Vdb or 0.005 in/sec PPV.²⁵ The vibration levels from traffic would be well below the thresholds for structural damage. Therefore, the impact to sensitive receptors and buildings from vibration generated by traffic would be less than significant.

Railway

The operation of freight trains along the Alameda corridor currently generates vibration. The proposed General Plan update would not change the levels of vibration along this line. All future development in the vicinity of the Alameda corridor would be subject to the noise screening distances found in the Federal Railroad Administration (FRA) High-Speed Ground

²⁵ FTA, 2018. *Transit Noise and Vibration Impact Assessment Manual*, September.

Transportation Noise and Vibration Manual.²⁶ The screening distance for railroad corridor rail mainline is 300 feet for mechanical/structural sources and 700 feet for aerodynamic sources with steel-wheeled trains and 200 feet for mechanical/structural sources and 300 feet for aerodynamic sources with intervening buildings. At these distances, vibration levels would attenuate rapidly and any new developments would not be affected. Therefore, the impact to sensitive receptors and buildings from vibration generated by rail traffic would be less than significant.

Proposed General Plan Policies that Address the Impact

Guiding Policies NO-G-1, NO-G-2, NO-G-3, LUR-G-10, LUR-G-13, LUR-G-14, CIR-G-3, and CIR-G-4, and Implementing Policies NO-P-1, NO-P-2, NO-P-3, NO-P-5, NO-P-6, NO-P-7, NO-P-8, LUR-P-17, LUR-P-19, LUR-P-22, LUR-P-24, CIR-P-10, CIR-P-12, CIR-P-28, CIR-P-29, and CIR-P-30, as discussed under Impact NOI-1.

Mitigation Measures

None required.

Airport Noise

Threshold NOI-3: The Project would have a significant impact if future development allowed by Carson2040 would expose people residing or working in the project area to excessive noise levels, for projects located within the vicinity of a private airstrip or airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport.

Impact NOI-3: *The Project would not expose people residing or working in the project area to excessive noise levels generated by aircraft. (Less than Significant)*

The city of Carson is not located within the vicinity of a private airstrip or airport land use plan, or where such a plan has not been adopted, is not located within two miles of a public airport or public use airport. The Compton Airport is located approximately one-half mile to the northwest of the city while the Long Beach International and Los Angeles International airports are located approximately 13 miles and 12.7 miles to the southeast and the northwest of the city, respectively. The city is affected by the overflight of airplanes from these airports, but is not within the 60 dBA CNEL of any of these airports. Therefore, implementation of the proposed General Plan update would not expose people residing or working in the project area to excessive noise levels, and thus this impact would be less than significant.

Proposed General Plan Policies that Address the Impact

Guiding Policies NO-G-1 and NO-G-2, and Implementing Policies NO-P-1, NO-P-2, and NO-P-3, as discussed under Impact NOI-1.

Mitigation Measures

None required.

²⁶ FRA, 2012. High-Speed Ground Transportation Noise and Vibration Impact Assessment.

3.11.6 Cumulative Impact Analysis

The geographic context for the analysis of cumulative noise and vibration impacts depends on the impact being analyzed. For construction impacts, only the immediate area around an individual development site would be included in the cumulative context. For operational/roadway related impacts, the context is existing and future development in the city of Carson, in conjunction with ambient growth and other development within the vicinity of the city.

Noise

Construction

An increase in noise at sensitive uses would occur as a result of the construction of specific development projects allowed under the proposed General Plan update along with other construction in the vicinity. Where projects in the vicinity adjoin the construction of specific development projects allowed under the proposed General Plan update, the combined construction noise levels would have a cumulative effect on nearby sensitive uses. Noise is not strictly additive, and a doubling of noise sources would not cause a doubling of noise levels, but would result in a 3 dBA increase over a single source. However, cumulative construction noise levels could be in excess of the noise standards established in the General Plan, thus resulting in a cumulative construction noise impact.

Determining the exact location and potential noise levels of future construction activities would be considered speculative at this time. Further, construction noise levels would be considered a temporary nuisance, as the increase in noise levels would only occur during the use of construction equipment associated with each specific development project. As discussed earlier, construction at each site within the city will be required to comply with the Carson Municipal Code noise control ordinance. Noise is a localized phenomenon, and because the city is predominately developed with urban uses, it is unlikely that multiple construction projects would occur simultaneously and in close enough proximity to each other to create a significant combined noise impact. Instead, periodic infill development in various areas of the city would be expected to occur. Therefore, the contribution of the Project to any potential cumulative construction noise impact would not be cumulatively considerable.

Traffic

Permanent increases in noise would occur primarily as a result of increased traffic on local roadways due to development under the proposed General Plan update and ambient growth through 2040 throughout the region. Related development in adjacent jurisdictions may contribute traffic to the city roadway network. Cumulative traffic-generated noise impacts have been assessed based on the contribution of the proposed General Plan update to the future cumulative base traffic volumes in the project vicinity. **Table 3.11-16, *Cumulative Traffic Noise Impacts***, shows the impact of new cumulative traffic noise at General Plan buildout on existing sensitive receptors, such as the residences near the roadway segments, but comparing 2040 General Plan Buildout traffic volumes, which includes increases in traffic due to ambient growth in surrounding areas, to existing traffic volumes. As shown, existing sensitive receptors located near roadway segments would experience cumulative noise level increases greater than 3.0 dBA

CNEL for two roadway segments with an increase of 3.1 dBA CNEL for the segment of Alameda Street between Carson Street and Sepulveda Boulevard²⁷ and 3.2 dBA CNEL at the segment of Alameda Street south of Sepulveda Boulevard.²⁸ The segment of Alameda Street between Carson Street and Sepulveda Boulevard would be located in an area classified as Normally Unacceptable or Clearly Unacceptable (refer to Table 3.11-6, above). Therefore, the increase in traffic noise from implementation of the proposed General Plan update in conjunction with ambient growth and other development within the vicinity of the Carson would result in a significant cumulative impact. As shown in Table 3.11-13, above, project-only increases in future traffic noise levels would only reach 2.5 dBA CNEL along one roadway segment (Figueroa Street between Del Amo Boulevard and Sepulveda Boulevard). Additionally, proposed General Plan policies would reduce noise associated with traffic. Therefore, the contribution of the Project to this cumulative traffic noise impact would not be cumulatively considerable.

**TABLE 3.11-16
CUMULATIVE TRAFFIC NOISE IMPACTS**

	Existing Noise Levels	Future Plus Project Noise Levels	Increase
Roadway Segment	dBA CNEL at 50 Feet from Centerline		
223rd St between Alameda St and Wilmington Ave	69.9	71.9	2.0
223rd St between Wilmington Ave and Grace Ave	71.4	71.5	0.2
223rd St between Grace Ave and Main St	71.1	71.5	0.4
223rd St between Main St and Figueroa St	70.7	71.1	0.4
Alameda St between Del Amo Blvd and Carson St	74.1	77.0	2.9
Alameda St between Carson St and Sepulveda Blvd	75.8	78.9	3.1
Alameda St S/O Sepulveda Blvd	76.2	79.4	3.2
Albertoni St between Figueroa St and Avalon Blvd	67.0	68.3	1.3
Albertoni St between Avalon Blvd and Central Ave	63.2	65.1	1.9
Avalon Blvd between Walnut St and Alondra Blvd	73.1	73.1	0.0
Avalon Blvd between Walnut and University Dr	72.9	73.2	0.3
Avalon Blvd between University Dr and 220th St	72.1	72.4	0.3
Avalon Blvd between 220th St and Sepulveda Blvd	71.0	71.3	0.4
Avalon Blvd between Sepulveda Blvd and Lomita Blvd	64.6	65.9	1.3
Carson St W/O Figueroa St	70.7	71.4	0.7
Carson St between Figueroa St and Dolores St	70.9	71.5	0.6
Carson St between Dolores St and Arnold Center Dr	71.2	71.3	0.1
Carson St between Arnold Center Dr and Alameda St	65.4	65.4	0.0
Central Ave between Albertoni St and Victoria St	71.7	73.8	2.1
Central Ave between Victoria St and University Dr	67.1	68.8	1.7

²⁷ This segment of Alameda Street includes residential uses on the north end of the segment near Carson Street and industrial uses south of Interstate 405.

²⁸ This segment of Alameda Street includes industrial uses for over one mile south of Sepulveda Boulevard.

	Existing Noise Levels	Future Plus Project Noise Levels	Increase
Roadway Segment	dBA CNEL at 50 Feet from Centerline		
Central Ave between University Dr and Del Amo Blvd	67.6	69.8	2.2
Del Amo Blvd between Avalon Blvd and Central Ave	71.8	72.5	0.7
Del Amo Blvd between Central Ave and Alameda St	72.6	73.6	1.0
Figueroa St between Victoria St and Del Amo Blvd	65.6	67.3	1.7
Figueroa St between Del Amo Blvd and Sepulveda Blvd	66.0	66.6	0.6
Figueroa St between Sepulveda Blvd and Lomita Blvd	67.2	66.7	-0.5
Main St between 234th St and Vista Del Loma	68.0	67.8	-0.2
Main St Between Vista Del Loma and Griffith St	71.5	72.8	1.2
Main St between Griffith St and Albertoni St	68.7	70.0	1.3
Santa Fe Ave between Carson St and Del Amo Blvd	72.0	72.4	0.4
Sepulveda Blvd E/O Alameda St Connector	69.1	70.0	0.9
Sepulveda Blvd between Avalon Blvd and Alameda St	71.9	71.9	0.0
Sepulveda Blvd between Figueroa St and Avalon Blvd	72.1	72.4	0.4
Torrance Blvd between Figueroa St and Main St	65.9	68.0	2.1
University Dr between Avalon Blvd and Perimeter Rd	60.5	60.0	-0.5
University Dr between Perimeter Rd and Wilmington Ave	63.9	63.7	-0.2
Victoria St between Tamcliff Ave and Central Ave	68.6	68.5	-0.1
Victoria St between Central Ave and Wilmington Ave	65.0	63.3	-1.7
Wilmington Ave between Victoria St and Dominguez St	71.0	72.4	1.4
Wilmington Ave between Dominguez St and 220th St	71.2	72.9	1.7
Wilmington Ave between 220th St and 230 St	74.0	75.5	1.5
Wilmington Ave between 230th St and Sepulveda Blvd	74.3	75.2	0.9

SOURCE: Prepared by Environmental Science Associates based on Appendix E.

Vibration

Construction

Vibration generated by the construction of projects in the vicinity, while remote, could combine with the vibration generated by specific development projects allowed under the proposed General Plan update and exceed vibration thresholds at sensitive receptors, thus resulting in a potential cumulative construction vibration impact.

Determining the exact location and potential vibration levels of future construction activities would be considered speculative at this time. Further, construction vibration levels would be considered a temporary nuisance, as the increase in noise levels would only occur during the use of construction equipment associated with each specific development project. As discussed earlier, construction at each site within the city will be required to under-go site specific

environmental review. Vibration is a localized phenomenon, and because the city is predominately developed with urban uses, it is unlikely that multiple construction projects would occur simultaneously and in close enough proximity to each other to create a significant combined vibration impact. Instead, periodic infill development in various areas of the city would be expected to occur. Therefore, the contribution of the Project to any potential cumulative construction vibration impact would not be cumulatively considerable.

Traffic

Permanent increases in vibration would occur primarily as a result of increased traffic on local roadways due to development under the proposed General Plan update and ambient growth through 2040 throughout the region. Vibration from these sources, while remote, could combine and exceed vibration thresholds at sensitive receptors, thus resulting in a potential cumulative operational (traffic) vibration impact.

As discussed above, vibration from vehicles is temporary and intermittent and generates up to 61 Vdb or 0.005 in/sec PPV.²⁹ As a result, vibration levels from traffic generated by growth anticipated by the proposed General Plan update would be well below the thresholds for human annoyance and structural damage. Therefore, the contribution of the Project to any potential cumulative operational (traffic) vibration impact would not be cumulatively considerable.

²⁹ FTA, 2018. *Transit Noise and Vibration Impact Assessment Manual*, September.

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3.12 Population and Housing

3.12.1 Introduction

This section provides an analysis of the Project's potential to induce population growth and subsequently require additional housing within the city of Carson. This section also analyzes the Project's effects on population, housing, and employment as compared to adopted growth forecasts and relevant policies and programs regarding planning for future development. Potential growth-inducing impacts from future development allowed under the Project are further addressed in Chapter 5, *Other CEQA Considerations*, of this Draft EIR.

No comments were received in response to the Notice of Preparation (NOP) and Recirculated NOP regarding population and housing.

3.12.2 Environmental Setting

Population Growth Trends and Projections

The city of Carson is located within Los Angeles County, which is the most populous county in both California and the United States. As of 2020, Carson accounted for 0.9 percent of over 10 million residents in the county, and the city has added approximately 3,400 residents (3.8 percent growth) since 2000.¹ In comparison, the county has grown by 6.9 percent. The city's overall population growth has not kept pace with the region or county's growth due to the fact that Carson is largely built out, and both the limited amount of vacant land left in the city as well as the need for environmental remediation of land with past industrial uses can be constraints to development, especially housing.

The Southern California Association of Governments (SCAG) has projected that the city will proceed to grow at a faster pace than that experienced in the last 20 years.² Based on estimates from the State Department of Finance, Carson's population in 2020 was 93,100. As part of the General Plan update process, the City of Carson (City) has projected its 2040 population to be 136,600, which translates to a 46.7 percent increase in growth over the next 20 years. This projection assumes a residential vacancy rate of 4.8 percent and population per occupied unit ratio of 3.5 based on the 2020 population per occupied unit of 3.57,³ with a moderate two percent reduction projected through 2040 that aligns with decreasing average household sizes throughout the region.⁴

¹ 2000 population is from U.S. Census Bureau 2000 Decennial Census, and 2020 population is from California Department of Finance, Table E-5: Population and Housing Estimates for Cities, Counties, and the State, January 1, 2011–2020, with 2010 Benchmark.

² Southern California Association of Governments, 2020a. Connect SoCal Technical Report: Demographics and Growth Forecast. Table 14: Jurisdiction-Level Growth Forecast.

³ California Department of Finance, 2020. Table E-5: Population and Housing Estimates for Cities, Counties, and the State, January 1, 2011–2020, with 2010 Benchmark.

⁴ Southern California Association of Governments, 2020b. Connect SoCal Technical Report: Demographics and Growth Forecast. Table 6: Characteristics of the Region's Households, 2000–2045.

Carson and its Sphere of Influence (SOI) comprise the Planning Area for the General Plan. The SOI north of East Del Amo Boulevard and east of South Wilmington Avenue is part of unincorporated Los Angeles County (census tract 5433.05). The SOI north of East Alondra Boulevard is part of the unincorporated West Rancho Dominguez/Victoria area and census data is not available specifically for the portion of the area within the Carson Planning Area. Based on U.S. Census, Geographic Information Systems (GIS), and Traffic Analysis Zone (TAZ) data, it is estimated that Carson's SOI has a population of approximately 5,000 residents. Therefore, the total 2020 population of the Planning Area was estimated at 98,100 residents. The Project does not anticipate major land use changes in the SOI, but proportional population growth is projected to result in a 2040 population of about 5,100. This brings the projected 2040 Planning Area population to about 141,700 residents in total.

Housing Growth Trends and Projections

As described in Section 3.10, *Land Use and Planning*, of this Draft EIR, 25.6 percent of land in Carson is residential uses, the majority of which is single-family residential. Residential areas are primarily on the western side of the Planning Area, but many neighborhoods are directly adjacent to industrial uses along the Alameda rail corridor and within the SOI. Higher density housing and mixed-use residential are generally concentrated in the downtown Core area, such as between Carson and 223rd streets west of Interstate 405 (I-405). In this area, recent development such as the Union South Bay mixed-use project have introduced new, higher-density housing types to the city. Current development projects (those that are approved or under construction) that include housing vary from condominiums/townhouses to multifamily apartments that have higher densities, on average, than the dominant detached single-family typology.

As noted in Chapter 2, *Project Description*, there were 26,710 housing units in Carson in 2020. According to data from the Department of Finance, the number of housing units in Carson increased by about 1,110 (4.4 percent) between 2000 and 2020.⁵ The proposed General Plan update projects an increase of 13,690 housing units in the city of Carson between 2020 and 2040, which is an increase of 51.2 percent. This significant increase aligns with growth projected by SCAG, as well as the Regional Housing Needs Assessment (RHNA) allocation for Carson, which has more than tripled between the 5th and 6th housing element cycles (1,698 units for 2014–2021 and 5,618 units for 2021–2029). Based on County Tax Assessor parcel data and Geographic Information Systems (GIS) analysis performed in 2018, the number of housing units estimated in the SOI is about 1,700 and given that the Project does not anticipate significant land use changes in this area, only 40 units are projected to be added between 2020 and 2040. As such, the Project projects a total of about 42,140 housing units in 2040 for the entire Planning Area.

Employment Growth Trends and Projections

Employment in Carson has fluctuated over the past 20 years, partly due to the 2008 recession, but has generally been increasing, with a 17.6 percent growth in jobs between 2010 and 2018.⁶ Based

⁵ California Department of Finance, 2012. E-8 Historical Population and Housing Estimates for Cities, Counties, and the State, 2000–2010.

⁶ United States Census Bureau, 2018. OnTheMap web application, Work Area Profile Analysis by Place of Work. <https://onthemap.ces.census.gov/>. Accessed 20 August 2021.

on the latest available data from the U.S. Census Bureau, there were approximately 58,600 jobs in the city of Carson and 19,000 jobs in the SOI, for a total of 77,600 jobs within the Planning Area in 2018. The primary employment areas in the Planning Area correspond to industrial uses, and the industries with the highest employment are Manufacturing (16.4 percent), Transportation and Warehousing (14.3 percent), Administration and Support/Waste Management and Remediation (11.5 percent), Retail Trade (10.5 percent), and Wholesale Trade (9.4 percent),⁷ which are expected to continue to grow. Potential non-residential development in the Planning Area is projected to result in an increase of about 18,900 jobs, for a total of 96,500 jobs in 2040 (24 percent increase).

Jobs-housing balance, or more precisely, jobs to employed residents balance, can influence travel demand and commute patterns. A ratio of 1.0 means that the number of jobs equals number of employed residents, whereas a ratio greater than 1.0 indicates a net in-commute and less than 1.0 indicates a net out-commute. Actual in-commuting and out-commuting is influenced by many other factors, including job skills match, desired housing type match, and household locational preferences.

Historically an industrial city, Carson maintains a jobs surplus; as shown in **Table 3.12-1, Planning Area Jobs/Employed Residents Balance, 2020–2040**, Carson had an estimated 1.77 jobs for every employed resident in 2020. Jobs are projected to continue increasing under the Project. However, housing supply is expected to increase at a faster pace than jobs, resulting in a closer balance—1.49 jobs per employed resident—at buildout, providing more opportunities to those employed in Carson to live in the community.

**TABLE 3.12-1
 PLANNING AREA JOBS/EMPLOYED RESIDENTS BALANCE, 2020–2040**

	2020 ^{1,2}	2040 ²	Percent Change
Jobs	77,600	96,500	24%
Population	98,100	141,700	44%
Employed Residents	43,900	64,600	47%
Jobs/Employed Residents	1.77	1.49	-15%

¹ Existing (2020) numbers are derived from Project buildout calculations for the entire Planning Area.

² Numbers are rounded to the nearest 100.

Existing Population from California Department of Finance; jobs from Census OnTheMap; employment from California Employment Development Department.

SOURCE: City of Carson, 2022. *Carson2040 General Plan*. Prepared by Dyett and Bhatia.

⁷ United States Census Bureau, 2018. OnTheMap web application, Work Area Profile Analysis by Place of Work. <https://onthemap.ces.census.gov/>. Accessed 20 August 2021.

3.12.3 Regulatory Framework

This section provides the relevant state, regional, and local regulations applicable to the Project. There are no federal laws, policies, plans, or programs that apply to the Project in relation to this issue area.

State

California Government Code

Housing Element Law (Article 10.6)

The “No Net Loss” provisions in Section 65583.2 of the Housing Element law were established to make sure that housing elements identify sufficient sites to accommodate the jurisdiction’s RHNA or include programs to ensure that sites will be available throughout the planning period. Under the “No Net Loss” requirements, a jurisdiction may not reduce residential density or allow development at a lower residential density unless the jurisdiction makes findings supported by substantial evidence that the reduction is consistent with the general plan and there are remaining sites identified in the housing element adequate to meet the jurisdiction’s outstanding RHNA.

Article 2 Section 65863.7

Section 65863.7 requires the person or entity proposing a conversion of land use, closure, or cessation of use of a mobilehome park to file an impact report and include a replacement and relocation plan that adequately mitigates the impact upon the availability of displaced residents of the mobilehome park to find adequate housing in a mobilehome park.

Senate Bill 330 (Housing Crisis Act of 2019)

The Housing Crisis Act of 2019 prevents an affected city or county (an urbanized area or urban cluster with a population greater than 5,000 as designated by the U.S. Census Bureau) from lowering intensities or densities below what was permitted by zoning or general plan land use designation on January 1, 2018, or from enacting development policies, standards, or conditions that may impose a restriction or limitation on housing development. Further, an affected city or county is required to replace all existing or demolished protected units if an approved housing development project requires demolition of existing residential dwelling units, particularly protected units.

California Relocation Law, Public Resources Code Section 7260 et seq.

The California Relocation Law requires the fair and equitable treatment of persons displaced as a direct result of programs or projects undertaken by a public entity. The law requires agencies to prepare a relocation plan, provide relocation payments, and identify substitute housing opportunities for any resident that is to be displaced by a public project.

Department of Housing and Community Development

The California Department of Housing and Community Development (HCD) is responsible for determining the regional housing need for all jurisdictions in California and ensuring the availability of affordable housing for all income groups. This is achieved through RHNA, which first determines housing needs by income groups at a statewide level. Jurisdictions must meet their “fair share” of RHNA (determined by their respective regional agencies) through their housing elements.

Sustainable Communities and Climate Protection Act of 2008 (Chapter 728, Statutes of 2008)

The Sustainable Communities and Climate Protection Act of 2008, otherwise known as Senate Bill (SB) 375, requires the integration of land use, housing, and transportation planning to achieve regional greenhouse gas (GHG) emission reductions, adopted by the California Air Resources Board. SB 375 requires Metropolitan Planning Organizations (MPOs) to develop a Sustainable Communities Strategy (SCS)—a new element of the regional transportation plan (RTP)—to plan for achieving these GHG reduction targets. The SCS must demonstrate the attainment of the regional GHG emissions reduction targets while accommodating the full projected population of the region.

Regional

Southern California Association of Governments 2020–2045 Regional Transportation Plan/Sustainable Communities Strategy (Connect SoCal)

The 2020–2045 Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS, referred to as Connect SoCal) was adopted in September 2020 by the Southern California Association of Governments’ (SCAG) Regional Council. Connect SoCal is a long-range plan that guides land use and transportation strategies to increase mobility and achieve more sustainable growth patterns by locating housing, jobs, and transit closer together and increasing investment in transit and complete streets. These investments are targeted in Priority Growth Areas.

SCAG Regional Housing Needs Assessment

The RHNA is a key tool for local governments to plan for anticipated growth. The RHNA quantifies the anticipated need for housing within each jurisdiction for the 6th Housing Element cycle extending from January 2021 to October 2029. Communities then determine how they will address this need through the process of updating the housing elements of their general plans. The RHNA was adopted by SCAG in May 2021. The total housing growth need for the city of Carson during the 2021–2029 planning period is 5,618 units.

Los Angeles County General Plan

Provisions of the Los Angeles County General Plan apply to unincorporated areas of Los Angeles County, including the SOI adjacent to Carson city limits analyzed in the Project and EIR.

Local

City of Carson Zoning Ordinance

The City regulates the type, location, density, and scale of residential development through Article IX of the Carson Municipal Code (Carson Zoning Ordinance) and Zoning Map. Zoning regulations serve to implement the General Plan and are designed to protect and promote the public health, safety, comfort, convenience, and general welfare of residents. The Zoning Ordinance also helps to preserve the character and integrity of existing neighborhoods. The Zoning Ordinance and Zoning Map set forth residential development standards for each zoning district.

Specific Plans

The City uses specific plans to coordinate development and infrastructure improvements on large sites or series of parcels, which must be consistent with the General Plan. As detailed in Section 3.10, *Land Use and Planning*, of this Draft EIR, the following specific plans are included in buildout projections of the Project:

- **Dominguez Hills Village Specific Plan.** Originally adopted in 1996 and amended most recently in 2019 for the development 175 multifamily units, northeast of South Central Avenue and East Victoria Street (parcel “DHV-Commercial/Industrial,” formerly known as “Victoria Greens” and currently referred to as the Carson Landing Project) as well as 36 townhome units on a 1.6-acre portion of the site (Brandywine project).
- **The District at South Bay.** Originally adopted as The Carson Marketplace Specific Plan in 2006, and most recently amended in 2018 as The District at South Bay Specific Plan, this project includes development of 1,250 units and 1.6 million square feet of retail on 157 acres south of Del Amo Boulevard. The 11-acre portion north of Del Amo Boulevard has already been entitled for 300 multifamily units. A 2021 amendment is currently under review to increase the square footage of development to 2.3 million square feet; there is no change to the 1,250 residential units.
- **Union South Bay.** Adopted in 2015 (originally The Avalon Project), this project was completed in 2020 as a mixed-use development located at 21601 Avalon Boulevard and included 357 market-rate apartments with 32,000 square feet of ground-floor commercial uses.
- **Birch Specific Plan.** Adopted in 2019, this condominium project, located at 21809–21811 South Figueroa Street, along the western edge of the city adjacent to I-110, consists of 32 new units that will replace existing single-family residential structures.
- **Torrance/Main Specific Plan.** Proposed reuse and revitalization of a brownfield property for urban residential or mixed-use development with up to 356 market-rate apartment units on 5.4 acres located at 225 West Torrance Boulevard. This project is currently under review but is included in buildout projections.
- **Imperial Avalon Specific Plan.** Proposed redevelopment of an existing 27.3-acre mobile home park at 21207 South Avalon Boulevard with 680 market-rate apartments, 180 senior apartments, 380 townhomes, and about 7,200 square feet of restaurant/café uses. This project is currently under review but is included in buildout projections.

3.12.4 Project Impact Analysis

Thresholds of Significance and Methodology

Thresholds of Significance

Appendix G of the State CEQA Guidelines provides screening questions that address potential impacts related to a number of environmental issues. The CEQA guidelines provides that lead agencies may use the questions set forth in the Appendix G to assess the significance of a project’s environmental effects, and the use of Appendix G as a significance threshold is routinely sanctioned

by the courts (although such use is not mandatory). Based on the Appendix G question regarding population and housing, a project would have a significant impact if the project would:

- Threshold POP-1:** Induce substantial unplanned population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure); or
- Threshold POP-2:** Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere.

Methodology

This EIR analysis considers current and proposed General Plan policies, existing and proposed land use conditions within Carson that relate to population and housing, and applicable regulations and guidelines.

The proposed General Plan update has a year 2040 horizon; however, the proposed General Plan update does not speculate when buildout will occur, as long-range demographic and economic trends are difficult to predict. The designation within the proposed General Plan update of a site for certain use (as depicted in Figure 3.10-2, *Existing Land Uses*, in Section 3.10, *Land Use and Planning*) does not necessarily mean that the site will be developed or redeveloped with that use during the planning period, as most development will depend on property owner initiative. For the purposes of this EIR, the environmental analysis assumes that sites will be developed or redeveloped with the designated land use at buildout of the Project.

With much of the city currently “built out,” or developed, and otherwise environmentally constrained by former industrial uses, undeveloped land available for development is limited in Carson. The General Plan introduces flexibility of new land use classifications, as described in Section 3.10, *Land Use and Planning*, of this Draft EIR, which are part of a strategy to enable development of walkable mixed-use activity centers. Major land use changes are planned to take place as opportunities for infill development result in provision of a wider range of housing, employment, and recreational uses to meet the needs of families, young people, senior citizens, and residents of all incomes. Mixed-use designations were designed to revitalize Downtown Carson and facilitate greater access to services, entertainment, and community gathering, as well as to accommodate the needs of the city’s growing and diverse population.

Project Impact Analysis

Induce Unplanned Population Growth

Threshold POP-1: The Project would have a significant impact if future development allowed by the Carson2040 would induce substantial unplanned population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure).

Impact POP-1: *The Project would not induce substantial unplanned population growth in an area, directly nor indirectly. (Less than Significant)*

As mentioned above in Section 3.12.2, *Environmental Setting*, and Section 3.12.3, *Regulatory Framework*, the City of Carson has an RHNA obligation of 5,618 new units, which is a significant increase from previous RHNA allocations of previous housing cycles. Given that a housing cycle has a planning period of eight years, extrapolating this RHNA requirement to the Project's 2040 horizon would result in about 14,000 new units. Recognizing that market trends are difficult to predict, RHNA numbers are subject to change in the future, and growth is not a linear process, the proposed General Plan update very closely matches this value on an order of magnitude, with a potential buildout of 13,690 units between 2020 and 2040. New residential opportunities are a result of targeted residential density increases in new mixed-use designations along corridors and in the downtown Core area to provide higher density housing near jobs and community-serving retail and services. This type of infill development is designed to focus on redevelopment and revitalization of areas already served by infrastructure and would not require extensions of roads or other infrastructure. Additionally, proposed General Plan policies seek to provide housing that meets the diverse needs of Carson's growing population while preserving existing neighborhoods, as well as ensure that public facilities, services, and infrastructure maintain a level of service that supports a high quality of life for all residents.

The proposed General Plan update is a long-range planning effort that was designed to accommodate regional growth requirements for the next 20 years. As such, the Project would not induce substantial unplanned population growth, either directly or indirectly, and this impact is considered less than significant.

Proposed General Plan Policies that Address the Impact

Land Use and Revitalization

Guiding Policies

- LUR-G-4 Promote a diversity of complementary uses in different parts of the city, including mixed flexible office space, retail, dining, residential, hotels, and other compatible uses, to foster vibrant, safe, and walkable environments, with flexibility to accommodate emerging uses and building typologies.
- LUR-G-5 Provide opportunities for new residential development in a variety of settings, including through infill and redevelopment, without impacting existing neighborhoods or creating conflicts with industrial operations, while conserving mobile homes as much as possible, which provide more affordable housing.

LUR-G-9 Locate medium and high-density development along major corridors and major re-development sites in the central Core, to focus housing near regional access routes, transit stations, employment centers, shopping areas, and public services.

LUR-G-12 Promote adaptive reuse and environmental remediation of brownfield sites, sites with abandoned buildings and facilities, or underutilized properties with productive uses.

A brownfield is a property on which expansion, redevelopment, or reuse may be complicated by the presence or potential presence of a hazardous substance, pollutant, or contaminant. Cleaning up and reinvesting in these properties promotes efficient land use, facilitates job growth, utilizes existing infrastructure, and takes development pressures off other sites.

Implementing Policies

LUR-P-1 Where feasible, locate higher density residential uses in proximity to job centers and commercial centers in order to discourage long commute times and encourage pedestrian traffic and provide a consumer base for commercial uses.

LUR-P-16 Where larger parcels—such as the Shell site—are redeveloped, require development to implement urban design policies, including creation of smaller blocks (typically with no dimension larger than 300 to 600 feet dependent on use, with smaller blocks in residential areas) to create walkable, urban environments; buildings and landscapes that relate to the surroundings, with high-level of public-realm amenities, such as tree-lined streets; sidewalks, pedestrian paths, and crossings; and plazas and other gathering spaces for workers and visitors. Site planning for new construction should ensure that streets are lined with occupied buildings or landscapes, with parking and service facilities tucked behind or away from public streets.

LUR-P-18 Promote infill mixed-use development in either a vertical or horizontal configuration when aging shopping centers are redeveloped to create mixed-use corridors with a range of housing types at mid-to-high densities along their lengths and activity nodes at key intersections with retail/commercial uses to serve the daily needs of local residents.

This policy applies to areas that are designated as Corridor Mixed Use or Downtown Mixed Use, such as within the city's Core and Carson Plaza near the [California State University, Dominguez Hills] CSU-DH campus.

LUR-P-23 Undertake planned development and specific plans for unique projects as a means to achieve high community standards, address neighborhood or significant site-specific issues, ensure compatibility between a number of uses, on large parcels, and when needed as part of a redevelopment or environmental remediation strategy.

Such areas that would benefit from a specific plan include the Shell Site and South Bay Pavilion if redeveloped.

Open Space and Environmental Conservation

Guiding Policies

- OSEC-G-1 Maintain a balanced and integrated open space system reflecting a variety of considerations—resource conservation, production of resources, recreation, and aesthetic and community identity—and ensuring synergies between various open space components and compatibility with land use planning.
- OSEC-G-10 Provide for utilities and infrastructure to deliver safe, reliable services for current and future residents and businesses.

Mitigation Measures

None required.

Require Construction of New Housing

Threshold POP-2: The Project would have a significant impact if future development allowed by the Carson2040 would displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere.

Impact POP-2: *The Project would not displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere. (Less than Significant)*

A substantial portion (about 26 percent) of developed land in the Planning Area consists of single-family residential uses, which are not anticipated to undergo significant land use changes under the Project. The Project focuses infill development opportunities in vacant and underutilized areas in Carson, while seeking to preserve existing neighborhoods. Industrial uses make up the largest amount of land area within the Planning Area (about 47 percent). New land use classifications, as described and discussed in Section 3.10, *Land Use and Planning*, of this Draft EIR, introduce greater flexibility of uses, such as mixed-use, and allow residential uses in more areas of the city, including many that are currently single uses. New mixed-use designations downtown and along key corridors also enable greater opportunities for future residential development. As such, the Project is projected to increase the overall number of dwelling units and provide additional housing opportunities to serve the diverse needs of the community at various socioeconomic levels.

Article 10.6 of the California Government Code outlines the state’s Housing Element requirements. A housing element must analyze existing and projected housing needs, examine special housing needs within the population, evaluate the effectiveness of current goals and policies, identify governmental and other constraints, determine compliance with other housing laws, and identify opportunities to incorporate energy conservation into the housing stock. The element must also establish goals, policies, and programs to maintain, enhance, and develop housing.

Though initially prepared as part of the Project, the City of Carson’s 6th Cycle Housing Element has been separately adopted as of February 1, 2022. The Housing Element has been designed to be consistent with the proposed General Plan update and reflects the new land use designations that allow greater residential densities as described above in order to meet the RHNA obligation for the 2021–2029 housing element cycle. In addition, the Housing Element includes an in-depth

analysis of the city’s housing stock, past and anticipated trends, and housing needs that inform the element’s goals, policies, and programs, which include provisions to preserve, maintain, and rehabilitate existing housing, particularly affordable housing. The proposed General Plan update includes policies that support these objectives, including those that seek to ensure equity and protect diversity in Carson’s communities.

For these reasons, growth anticipated under the proposed General Plan update would not displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere, and this impact is less than significant.

Proposed General Plan Policies that Address the Impact

Guiding Policies LUR-G-5 and LUR-G-9 as discussed under Impact POP-1, in addition to the following:

Land Use and Revitalization

Implementing Policies

- LUR-P-2 Promote development of a range of housing types, including single-family homes on small lots, accessory dwelling units, townhomes, lofts, live-work spaces in transitioning industrial districts, and senior and student housing to meet the needs of future demographics and changing family sizes.

- LUR-P-3 Promote rehabilitation or redevelopment of older or dilapidated housing.

- LUR-P-4 Undertake a study to assess the feasibility and effectiveness of requiring inclusionary housing as part of residential development projects, and commercial/industrial and housing linkage fees.

- LUR-P-5 Support retention of existing mobile home parks as a form of affordable housing when feasible. When retention of existing mobile home parks is not feasible, require at minimum a one-to-one replacement of mobile home units with affordable housing units within the new development and undertake efforts to relocate existing residents to within the community in compliance with state requirements and local regulations.

Mitigation Measures

None required.

3.12.5 Cumulative Impact Analysis

The geographic context for the cumulative impacts associated with population and housing is the South Bay region of southern Los Angeles County. Future development in this portion of the county, including growth anticipated under the proposed General Plan update, would not induce substantial unplanned population growth in the area as future development would have to be consistent the general plans and zoning codes of local jurisdictions in the area, and therefore would not be unplanned. In addition, future development in the South Bay region of southern Los Angeles County, including growth anticipated under the proposed General Plan update, would not

result in the displacement substantial numbers of existing people or housing as future development would be required to follow existing state law governing relocation of residents. Therefore, future development in the South Bay region of southern Los Angeles County would not have a significant cumulative impact with respect to population and housing.

3.13 Public Services

3.13.1 Introduction

This section provides an analysis of potential impacts on public facilities and services from future development allowed under the Project, including impacts related to fire, police, school services, and other community facilities such as libraries and community centers. This section also evaluates the existing public services and facilities in the Planning Area, as well as relevant federal, state, and local regulations and programs. Park facilities are discussed in detail in Section 3.14, *Recreation*, of this Draft EIR.

No comments received in response to the Notice of Preparation (NOP) and Recirculated NOP regarding topics covered in this section.

3.13.2 Environmental Setting

Fire Protection

Los Angeles County Fire Department

The Los Angeles County Fire Department (LACFD) provides fire protection and emergency medical services as well as urban search and rescue and air operations to the city. LACFD services about 2,300 square miles, including 60 cities and unincorporated communities, and serves about 4.1 million residents. There are 4,700 total personnel working within the Fire Department's emergency and business operations bureaus, including firefighters, dispatchers, lifeguards, nurses, and administrative support. In 2020, LACFD responded to approximately 379,500 emergency dispatch calls, of which over 9,800 (2.6 percent) were fire incidents. A vast majority (about 307,000 calls, or 80.9 percent) were for emergency medical services (EMS).¹

According to the 2021 Department Overview Booklet, LACFD's fire and rescue resources include 177 fire stations, 228 engine companies, 112 paramedic units, and 34 truck companies. Specialized resources include three hazardous materials squads, six swift water rescue units, two urban search and rescue squads, two fire boats, and additional specialized equipment. The Air and Wildland Division also maintains a fleet of ten helicopters for paramedic transport, hoist rescues, and wildland firefighting, and contract aircraft are also available during wildfire season. LACFD is also home to California Task Force 2 (also known as USA Task Force 2), which is an urban search and rescue team that is qualified to respond to local, national, and international disasters.

Calls for emergency response are answered by nearly 100 dispatchers who dispatch units to approximately 400,000 incidents annually.² LACFD follows national guidelines that require a five-minute response time for first-arriving fire and EMS units and eight minutes for paramedic units in urban areas, as well as an eight-minute response time for first-arriving fire and EMS units and 12 minutes for paramedic units in suburban areas. In 2020, the average response time for fire

¹ Los Angeles County Fire Department, 2021. Department Overview Booklet. https://fire.lacounty.gov/wp-content/uploads/2021/09/Department-Overview-Booklet_single-pages_9.09.21-A.pdf. Accessed September 2021.

² Los Angeles County Fire Department, 2021. Department Overview Booklet. https://fire.lacounty.gov/wp-content/uploads/2021/09/Department-Overview-Booklet_single-pages_9.09.21-A.pdf. Accessed September 2021.

and emergency calls in the city of Carson/Planning Area was 4:55 minutes, which meets the target response time.

The Planning Area is part of Division 1 of the LACFD, and there are five fire stations staffed by 40 personnel in the Planning Area. These stations are shown in **Figure 3.13-1, Public Safety Facilities**, and summarized in **Table 3.13-1, Fire Stations within the Planning Area**.

**TABLE 3.13-1
 FIRE STATIONS WITHIN THE PLANNING AREA**

Fire Station	Staffing Description	Fire Engines/Other Key Equipment
Fire Station 10 (Battalion 7 Headquarters) 1860 E. Del Amo Carson CA 90746	1 Battalion Chief, 1 Captain, 1 Firefighter Specialist, 4 Firefighters/Paramedics	1 BC Command Vehicle, 1 Engine Company, 1 Paramedic Squad
Fire Station 36 127 W. 223rd St. Carson CA 90745	2 Captains, 2 Firefighter Specialists, 6 Firefighter/Paramedics	2 Engine Companies, 1 Paramedic Squad
Fire Station 105 18915 S. Santa Fe Ave. Compton CA 90221	2 Captains, 2 Firefighter Specialists, 5 Firefighters ¹	Haz-Mat Task Force (1 Haz-Mat Squad, 1 Engine Company, 1 Deluge Vehicle [Large Water Application])
Fire Station 116 755 Victoria St. Carson CA 90746	2 Captains, 2 Firefighter Specialists, 5 Firefighters	1 Quint, 1 Engine, 1 Paramedic Squad
Fire Station 127 2049 E. 223rd St. Carson CA 90810	1 Captain, 2 Firefighter Specialists, 2 Firefighters	1 Quint, 1 Foam Unit

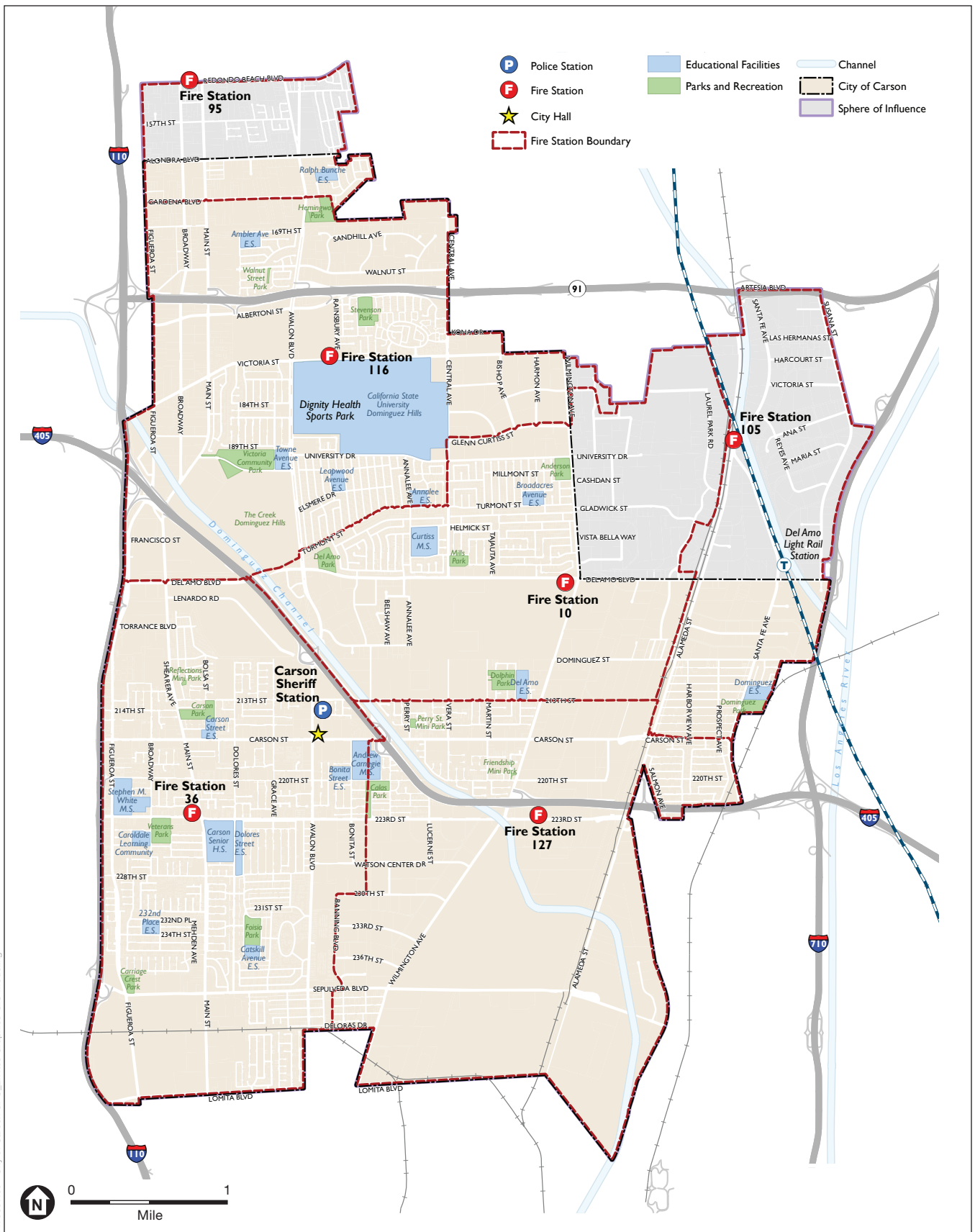
¹ All personnel at Fire Station 105 are Haz-Mat qualified.

SOURCE: Los Angeles County Fire Department, 2021. Department Overview Booklet. Available: https://fire.lacounty.gov/wp-content/uploads/2021/09/Department-Overview-Booklet_single-pages_9.09.21-A.pdf. Accessed September 2021.

Fire Hazards

Fire Hazard Severity Zones (FHSZs) are designated by the California Department of Forestry and Fire Prevention (CAL FIRE) and the LACFD within the city of Carson. FHSZs are areas that CAL FIRE has determined to be at risk of fire hazards based on factors such as fuel, slope, and fire weather. There are three zones that range from moderate to very high.

The city of Carson is classified as a Local Responsibility Area (LRA), meaning that a city or county is financially responsible for wildfire suppression. While LACFD has programs to mitigate wildfire risks within wildland-urban interface areas throughout the county, Carson is an urban environment without any FHSZs, and the type of fires the city usually encounters involve structural fires. Nevertheless, urban fires represent a significant risk, as fires in industrial areas could result in the release of hazardous toxic substances, fires in high occupancy buildings present safety problems, and fires spread by wind-driven embers can threaten whole neighborhoods where roofing materials are not fire resistant. Explosions and fire from complex industrial facilities, such as refineries, also pose a major safety and health risk to Carson residents and employees. The explosion at Marathon Petroleum refinery in February 2020 is one example of fire hazard risks that the city faces.



SOURCE: City of Carson, 2017; Los Angeles GIS Data Portal, 2017; Dyett & Bhatia, 2021

Carson General Plan Update
Figure 3.13-1
 Public Safety Facilities



Police Protection

Los Angeles County Sheriff's Department

Police services in the Planning Area are provided by the Los Angeles County Sheriff's Department (LASD). The Carson Station of the LASD is headquartered at 21356 South Avalon Boulevard, in close proximity to Carson City Hall and the Carson Community Center, as mapped in Figure 3.13-1.

The Carson Sheriff's Station performs various law enforcement, community policing, traffic enforcement, special event management, and investigative functions, as well as various administrative duties within the neighborhoods and communities surrounding the project site. Additionally, Carson Sheriff's Station units may respond to emergency calls in adjacent areas also served by LASD (including county parks and recreation facilities), in the event that the Carson Sheriff Station unit is the closest responder. The Carson Sheriff Station serves the city of Carson, and unincorporated portions of Torrance, Harbor City, and Rancho Dominguez. The city of Carson comprises a majority of the Carson Sheriff's Station's jurisdiction. The Carson Sheriff's Station had approximately 184 sworn officers and 39 professional staff as of 2020.³

The LASD has not established service ratios (e.g., officers per one thousand residents) for police services. The existing 2004 General Plan, however, describes 1.7 officers per 1,000 residents as excellent service for Carson. Based on Carson's 2020 population of 98,100, the Carson Sheriff's Department has about 1.9 officer per 1,000 residents, which slightly exceeds this level of service. However, when considering that the officers at the Carson Station serve other jurisdictions outside of Carson, the level of service per 1,000 residents is reduced, potentially below the city's service standard.

The LASD has service response time standards of 10 minutes for emergent calls, 20 minutes for priority calls, and 60 minutes for routine calls. According to the LASD, for the Carson Station, response times averaged 3.9 minutes for emergent calls, 7.1 minutes for priority calls, and 26.2 minutes for routine calls, exceeding response time standards. The LASD currently has no plans to relocate or expand the Carson Station.

Parks and Recreation Facilities

Please see Section 3.14, *Recreation*, of this Draft EIR, for information pertaining to parks and recreation facilities.

Schools

As shown in **Figure 3.13-2, Educational and Community Facilities**, there are 14 elementary schools (kindergarten through sixth grade), three middle schools (grade seven and eight), four high schools and alternative schools (grades nine through 12), one charter school, and three private schools within the Planning Area. Public school enrollment for schools in Carson is shown in **Table 3.13-2, Public School Enrollment in Carson**. Most of the public schools in the Planning Area are managed by the Los Angeles Unified School District (LAUSD). The Compton

³ Los Angeles County Sheriff's Department, 2020. Population and Geographic Data, 2020. <http://shq.lasdnews.net/CrimeStats/yir9600/yir2020/dept/89.htm>. Accessed April 2022.

Unified School District (CUSD) has one elementary school in the northern part of the Planning Area. Magnolia Science Academy 3 is overseen by the Los Angeles County Office of Education.

**TABLE 3.13-2
 PUBLIC SCHOOL ENROLLMENT IN CARSON**

School Name	Total Enrollment (2020-2021)	Projected Enrollment (2040) ¹	Enrollment Capacity	Remaining Capacity (2040)
Elementary Schools (K-6)	5,643	6,003	7,703	+1,700
Ambler Avenue Elementary School	547	-	594	-
Annalee Avenue Elementary School	230	-	513	-
Bonita Street Elementary School	418	-	792	-
Broadacres Avenue Elementary School	267	-	385	-
Caroldale Learning Community	796	-	1,058	-
Carson Street Elementary School	669	-	811	-
Catskill Avenue Elementary School	475	-	598	-
Del Amo Elementary School	315	-	407	-
Dolores Street Elementary School	488	-	700	-
Dominguez Elementary School	501	-	574	-
Dr. Ralph Bunche Elementary School ²	N/A	-	N/A	-
Leapwood Avenue Elementary School	216	-	299	-
Towne Avenue Elementary School	309	-	451	-
Two Hundred Thirty-Second Place School	412	-	521	-
Junior High Schools (7-8)	2,816	2,878	4,058	+1,180
Andrew Carnegie Middle School	736	-	1,428	-
Glenn Hammond Curtiss Middle School	448	-	954	-
Stephen M. White Middle School	1,632	-	1,676	-
High Schools (9-12) / Alternative Schools	2,563	2,764	2,970	+206
Academies of Education and Empowerment at Carson High School	523	-	674	-
Academy of Medical Arts at Carson High School	504	-	577	-
Carson Senior High School	1,469	-	1,566	-
Eagle Tree Continuation	67	-	153	-
Charter Schools	NA	-	N/A	-
Magnolia Science Academy ³	NA	-	N/A	-
TOTAL	11,022	11,644	14,731	+3,086

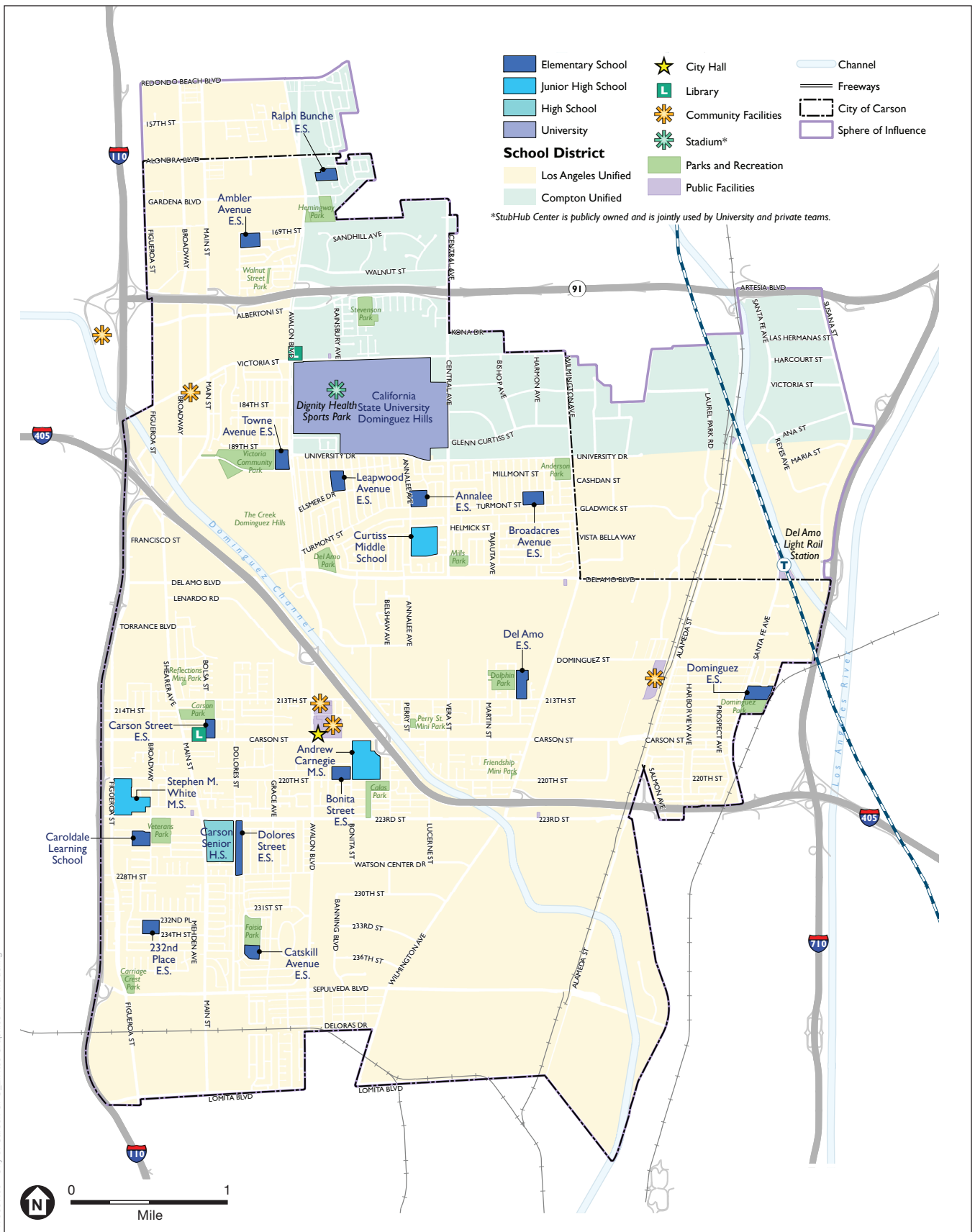
NOTES

¹ Calculation is based on project buildout, school enrollment projection is aggregated by elementary (K-6), junior high (7-8), and high school (9-12).

² Dr. Ralph Bunche Elementary School is managed by the Compton Unified School District. Enrollment from the Planning Area and enrollment capacity are unknown at this time.

³ Enrollment information not available.

SOURCES: City of Carson, 2022. Chapter 7: Community Services, Education, and Safety. *Carson2040 General Plan*. Prepared by Dyett and Bhatia.



D:\770087.00 - City of Carson GPU_EIR\05 Graphics-GIS-Modeling

SOURCE: City of Carson, 2017; Los Angeles GIS Data Portal, 2017; Dyett & Bhatia, 2021

Carson General Plan Update

Figure 3.13-2
Educational and Community Facilities



LAUSD allows enrollment across city jurisdictions, so students from Carson represent only a portion of total enrollment of schools in the Planning Area. According to the California Department of Education (CDE), kindergarten through 12th grade (K-12) public school enrollment between 2000 and 2020 fell by about 146,350 students, or 20 percent.⁴ According to the 2021 LAUSD Facilities Services Division Strategic Execution Plan, LAUSD does not plan to close or construct new school facilities in the Planning Area.⁵

As summarized by Table 3.13-2, buildout of the General Plan projects a small increase in K-12 school enrollment by 622 students, for a total of 11,644 students in 2040. Based on enrollment capacity information provided by LAUSD in 2017, schools in the Planning Area have a total capacity of 14,731 seats. Even without construction of additional facilities and given that the district does not plan to close any schools in the Planning Area, existing facilities are sufficient to meet projected enrollment needs, with a surplus of about 3,000 remaining seats.

Other Community Facilities

Community centers and other public facilities are shown in Figure 3.13-2.

- Carson City Hall is located at 701 East Carson Street and houses many City administrative offices.
- Two branches of the Los Angeles County Library system: Carson Library (151 East Carson Street) and Dr. Martin Luther King, Jr. Library (17906 South Avalon Boulevard) are located within the Planning Area. These libraries also serve as community centers where programs such as Early Learning and Engagement or countywide community events and activities are offered. Public amenities including computers, photocopiers, and meeting spaces are also available.
- The Congresswoman Juanita Millender-McDonald Carson Community Center, also known as the Carson Event Center, is located at 801 East Carson Street. The center offers 40,000 square feet of meeting and event space, including a 12,000-square-foot ballroom, meeting rooms that accommodate up to 1,200 people, and audio/visual services.

3.13.3 Regulatory Framework

This section provides the relevant state, regional, and local regulations applicable to the Project. There are no federal regulations which apply to the Project.

⁴ California Department of Education, 2021. Los Angeles County Office of Education Report, DataQuest Enrollment Multi-Year Summary by Grade. <https://dq.cde.ca.gov/dataquest/dqcensus/EnrGrdYears.aspx?cds=1964733&agglevel=district&year=2020-21>. Accessed September 2021.

⁵ Los Angeles Unified School District, 2021. Facilities Services Division Strategic Execution Plan. https://www.lascho.org/documents/download/about_fsd/sep/2012_consolidated_strategic_execution_plan/2020_SEP.pdf?version_id=324074278. Accessed September 2021.

State

California Fire Code

The California Fire Code is Chapter 9 of Title 24 of the California Code of Regulations. The California Fire Code provides regulations for safeguarding life and property from fire and explosion hazards derived from the storage, handling, and use of hazardous substances, materials, and devices. The provisions of this code apply to construction, alteration, movement, enlargement, replacement, repair, equipment, use and occupancy, location, maintenance, removal, and demolition of every building or structure or any appurtenance connected or attached to such building structures throughout the state.

Uniform Fire Code

The Uniform Fire Code contains regulations relating to construction, maintenance, and use of buildings. Topics addressed in the code include fire department access, fire hydrants, automatic storage and use, provisions intended to protect and assist fire responders, industrial processes, and many other general and specialized fire-safety requirements for new and existing buildings and the surrounding premises. The code contains specialized technical regulations related to fire and life safety.

California Health and Safety Code

State fire regulations are set forth in Section 13000 et seq. of the California Health and Safety Code, including regulations for building standards (also set forth in the California Building Code), and fire protection and notification systems, fire protection devices such as extinguishers and smoke alarms, high-rise building and childcare facility standards, and fire suppression training.

California Occupational Safety and Health Administration

In accordance with California Code of Regulations, Title 8, Sections 1270, Fire Prevention, and 6773, Fire Protection and Fire Equipment, the California Occupational Safety and Health Administration has established minimum standards for fire suppression and emergency medical services. The standards include, but are not limited to, guidelines on the handling of highly combustible materials; fire hose size requirements; restrictions on the use of compressed air; requirements for access roads; and guidelines for testing, maintaining, and using all firefighting and emergency medical equipment.

Mutual Aid Agreements

The California Disaster and Civil Defense Master Mutual Air Agreement, as provided by the California Emergency Services Act, provides statewide mutual aid between and among local jurisdictions and the state. The statewide mutual aid system exists to ensure that adequate resources, facilities, and other supports are provided to jurisdictions whenever resources prove to be inadequate for a given situation. Each jurisdiction controls its own personnel and facilities but can give and receive help whenever needed.

California Green Building Standards Code (CALGreen)

The California Green Building Standards Code (CALGreen), part of the California Building Standards Code, mandates green building requirements for the planning, design, operation, construction, use, and occupancy of every newly constructed building in California. CALGreen elements cover environmental impacts such as stormwater pollution, water use, energy conservation, construction waste, and building maintenance and operation.

Senate Bill 50 (Chapter 407, Statutes of 1998)

Under SB 50, a school district may levy impact fees on new development in order to mitigate potential impacts of the development on school facilities, and payment of these fees is considered full and complete mitigation of the impacts, according to California Government Code Section 65995. However, Government Code Section 65995 limits the power of cities and counties to require mitigation of school facilities impacts as a condition of approving new development.

California Education Code

Part 10.5, Chapter 1 School Sites

Sections 17210 to 17224 of the California Education Code governs the evaluation and selection of new sites and additions to existing sites for public schools, and for charter schools seeking state funding for school property acquisition or construction. Section 17211 requires the governing board of a school district to evaluate property proposed for a new school site or addition to an existing site at a public hearing prior to acquisition. Section 17212 requires the governing board of a school district to evaluate expert investigations into all factors affecting the public interest regarding a proposed school site prior to acquisition, including geological and soil engineering studies of such a nature as to preclude siting of a school in any location where the geological and site characteristics are such that the construction effort required to make the building safe for occupancy is economically infeasible. Under Section 17212, the evaluation should also include the site's location in respect to population, transportation, water supply, waste disposal, utilities, traffic hazards, and surface drainage conditions, and other factors affecting the costs of the project. The chapter precludes the selection of a site where hazardous geological or soil conditions, hazardous substances, or proximity to an airport would pose a danger to public health or safety.

Part 10.5, Chapter 3 Construction of Buildings

The CDE establishes standards for the selection of school sites pursuant to Education Code Section 17251. In 2000, the CDE School Facilities Planning Division (SFPD) updated the Guide to School Site Analysis and Development, which was originally published in 1966. The guide assists school districts in determining the amount of land needed to meet their educational purposes according to CDE recommendations.

California Public Resources Code Section 21151.8

Public Resources Code Section 21151.8 requires that an EIR or negative declaration for a project involving the purchase of a school site or the construction of a new elementary or secondary school by a school district must include information on potential safety and health hazards to

school occupants, including the presence of hazardous waste, hazardous substance release, pipelines, and air quality risks.

Regional

Los Angeles County Fire Code

The County Fire Code consists of fire prevention provisions, development specifications and fuel modification requirements. Fire prevention provisions covered in the County Fire Code include fire apparatus access roads, adequate road widths, all-weather access requirements, fire flow requirements, and fire hydrant spacing. The code also requires clearance of brush around structures located in hillside areas that are considered at risk for wildland fire.

Los Angeles County Operational Area Emergency Response Plan

The County approved an Operational Area Emergency Response Plan in 1998, which was updated in 2012. The plan establishes the County's emergency organization, assigns tasks, specifies policies and general procedures, and provides for coordination of planning efforts among the various emergency departments, agencies, special districts, and jurisdictions that make up the County Operational Area. The plan ensures the most effective allocation of resources for the protection of the public in the event of an emergency.

Los Angeles County General Plan

The 2015 Los Angeles County General Plan has two chapters that pertain to police and fire services: the General Plan Public Services and Facilities Element and the General Plan Safety Element. The Public Services and Facilities Element establishes goals and policies for effective service and facilities planning and maintenance. The General Plan Safety Element establishes goals and policies for reducing the potential risk of death, injury, and economic damage from natural and human-caused disasters. As it relates to public services, the General Plan Safety Element has goals and policies related to effective emergency response and preparing for and/or preventing fire hazards. Most of the General Plan goals and policies for fire hazard preparation and prevention pertain to wildland fire hazards. The Planning Area is not located within a Very High Fire Hazard Severity Zone as indicated by CAL FIRE.⁶

Local

City of Carson Natural Hazards Mitigation Plan

The Natural Hazards Mitigation Plan adopted in 2013 includes resources and information to assist city residents, public and private sector organizations, and others interested in participating in planning for natural, man-made, and technological hazards. The Mitigation Plan provides a list of activities that may assist City of Carson in reducing risk and preventing loss from future hazard events. The action items address multi-hazard issues, as well as activities for Earthquake, Flood, and Windstorm. The mission of the City of Carson Mitigation Plan is to promote sound public policy designed to protect citizens, critical facilities, infrastructure, private property, and the

⁶ California Department of Forestry and Fire Protection (CAL FIRE). 2011. Very High Fire Hazard Severity Zones in Local Responsibility Areas (Los Angeles County. September 2011.

environment from natural hazards. This can be achieved by increasing public awareness, documenting the resources for risk reduction and loss-prevention, and identifying activities to guide the City in creating a more sustainable community.

City of Carson Fire Prevention Code

Chapter 1 of Article 3 of the Carson Municipal Code is the Fire Prevention Code, which is an amended version of the Los Angeles County Fire Code that the City adopted by reference as of January 24, 2017. The County's fire code itself is an amended version of the California Fire Code.

3.13.4 Project Impact Analysis

Thresholds of Significance and Methodology

Thresholds of Significance

Appendix G of the State CEQA Guidelines provides screening questions that address potential impacts related to a number of environmental issues. The CEQA guidelines provides that lead agencies may use the questions set forth in the Appendix G to assess the significance of a project's environmental effects, and the use of Appendix G as a significance threshold is routinely sanctioned by the courts (although such use is not mandatory). Based on the Appendix G questions regarding public services, a project would have a significant impact if the project:

Threshold PUB-1: Would result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public service:

- i. Fire Protection;
- ii. Police Protection;
- iii. Schools;
- iv. Parks;
- v. Other Public Facilities

Methodology

As discussed in Chapter 2, *Project Description*, of this Draft EIR, this analysis uses a Planning Area buildout population estimate of 141,700 for the proposed General Plan update (136,600 within city limits and 5,100 in the SOI). This figure is derived from a projected dwelling unit capacity of 42,140 units.

Public safety services are assessed based on national guidelines for response time for first-arriving fire, EMS, and paramedic units. The County Fire Department follows these guidelines, which are five minutes for first-arriving fire and EMS units and eight minutes for paramedic units in urban areas. In suburban areas, the standards are an eight-minute response time for first-arriving fire and EMS units and 12 minutes for paramedic units.

Projected demand for school facilities is based on current (2020-2021) student enrollment data from the State Department of Education, countywide population growth projections by age group from the State Department of Finance, and the increase in housing units resulting from buildout of the proposed General Plan update. It is assumed that the demographic trends (population growth by age) for the Planning Area are consistent with the county. For example, projected elementary school enrollment was calculated by multiplying the projected total buildout population by the current proportion of the Planning Area population in elementary school (2020 elementary school enrollment divided by 2020 population) and by proportional change in elementary-school-age population projected for the county (2040 percent elementary-school-age population in the county divided by 2020 percent elementary-school-age population in the county). Age ranges used for each school level are: Five through 12 for elementary school, 13 and 14 for junior high school, and 15 through 19 for high school. Development impact fees for school facilities are levied by the school district, pursuant to SB 50; therefore, consideration of potential impacts from development on school facilities anticipated under the proposed General Plan update is outside of the scope of this EIR and would be addressed at the time development is proposed through procedures outlined in Government Code Section 65995. Only indirect impacts resulting from the construction of new facilities are evaluated in this EIR.

Project Impact Analysis

Public Services

Threshold PUB-1: The Project would have a significant impact if future development allowed by Carson2040 would result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public service: (i) fire protection, (ii) police protection, (iii) schools, (iv) parks, (v) other public facilities.

Impact PUB-1: *The Project would not result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services: (i) fire protection, (ii) police protection, (iii) schools, (iv) parks, (v) other public facilities. (Less than Significant)*

Fire Service

While the projected net service population increase of 43,600 residents by 2040 would likely increase the demand for emergency fire response and preventive services in the Planning Area, the increase in population would occur incrementally over the next 20 years. Moreover, the Planning Area is a predominantly urban area that is “built out,” with limited land available for development, and proposed General Plan policies promote infill and revitalization strategies that foster compact development patterns. As such, new growth will primarily occur within existing service areas. No new fire service facilities are included in the Project.

Existing City of Carson and County of Los Angeles policies would minimize calls for fire protection services. The Fire Prevention Code of the City of Carson adopts an amended version of the County's fire code, which itself constitutes an amended version of the California Fire Code. As noted in Section 3.12.2, *Environmental Setting*, Carson is a LRA but does not contain any FHSZs, and most fire hazards in the Planning Area are characterized as urban fires.

Policies included in the Project requiring the fire department's review of development proposals and coordination with the fire department to reduce risk of and improve response to fires due to industrial activities would help to keep service demand increases to a minimum. In addition, the Project promotes compact development patterns through infill development, ensuring new development would be located close to existing fire stations. In general, new development anticipated under the Project would be located near the city's core and along major corridors, as described in Section 3.10, *Land Use and Planning*, of this Draft EIR. Furthermore, proposed policies that promote traffic calming, alternative transportation, and road diets contain language to ensure that emergency vehicles could efficiently access all parts of the Planning Area, thereby reducing the need for new facilities located closer to new development.

Should new fire service facilities need to be constructed in the future, construction of those facilities could result in environmental impacts, including potential disturbances or conversion of habitat, water pollution during construction, increased noise levels, and an increase in impermeable surfaces. If implementation of the Project results in the need for new fire service facilities, existing regulations such as CALGreen would serve to reduce potential environmental impacts associated with construction. Additionally, new projects would be subject to CEQA requirements for environmental assessment, which would allow for the identification and consideration of potential impacts and mitigation, although compliance would not necessarily guarantee that significant impacts would be avoided or mitigated. New facilities would be located consistent with specified land use designations and would be subject to policies in the proposed General Plan update. These policies would address potential impacts of siting, construction, and operation of new facilities to the extent assessed in other sections of this EIR. Proposed policies include those requiring construction best management practices to limit land disturbance, development review to protect significant biological resources, air pollution mitigation measures, promotion of water- and energy-efficient construction and landscaping, implementation of noise mitigation measures, and management of archaeological materials found during development.

Due to the minimal effects that the development of new facilities could have on the environment with compliance with existing regulations and proposed General Plan policies, the concentration of new development in areas already well-served by fire protection services, and the addition of policies to reduce fire hazards in the city, the impact of the Project with respect to fire protection is considered less than significant.

Police Service

No new police service facilities are included in the proposed General Plan update. However, LASD maintains other facilities outside of the Planning Area that are available to the city immediately, including the Homicide Bureau, Aero Bureau, OSS (gang unit), and Traffic Services Bureau. If needed, 22 other LASD stations are also available to send resources to Carson.

As described in Section 3.13.2, *Environmental Setting*, there are approximately 1.9 officers per 1,000 residents in Carson as of 2020. While the proposed General Plan update would result in additional population that might increase demand for service, proposed policies would reduce the need for additional police services. The Project promotes Crime Prevention through Environmental Design (CPTED) and other public safety programs, which would help to keep service demand increases to a minimum. In addition, proposed policies promote compact development patterns achieved through infill development and revitalization of proposed mixed-use areas in the core and along key corridors. Thus, potential future development would be located close to the existing police station. Furthermore, proposed policies regarding emergency access, and acceptable travel flow would ensure that emergency vehicles could efficiently access all parts of the Planning Area, thereby reducing the need for new facilities located closer to new development.

Should new police service facilities need to be constructed in the future, construction of those facilities could result in environmental impacts, including disturbances or conversion of habitat, water pollution during construction, increased noise levels, and an increase in impermeable surfaces. If growth due to implementation of the Project results in the need for new police service facilities, new projects would be subject to CEQA requirements for environmental assessment, which would allow for the identification and consideration of potential impacts and mitigation, although compliance would not necessarily guarantee that significant impacts would be avoided or mitigated. New facilities would be located consistent with specified land use designations and would be subject to policies in the Project that would address potential impacts of siting, construction, and operation of new facilities to the extent assessed in other sections of this EIR. Proposed policies include those requiring construction best management practices to limit land disturbance, development review to protect significant biological resources, air pollution mitigation measures, promotion of water- and energy-efficient construction and landscaping, implementation of noise mitigation measures, and management of archaeological materials found during development.

Due to the minimal effects that the development of new facilities would have on the environment with compliance with existing regulations and Project policies, the concentration of new development in areas already served by police protection services, and the addition of policies to address crime potential in the city, the impact of the Project with respect to police services is considered less than significant.

Schools

The proposed General Plan update anticipates the construction of up to 13,710 new potential housing units in the Planning Area by 2040. As summarized in Table 3.13-2, the Project projects a very modest growth in Carson public school enrollment by approximately 360 elementary students, 62 junior high school students, and 201 high school students, between 2020 and 2040. No new school facilities are included in the Project.

Although capacity at existing facilities is estimated to be sufficient to accommodate future public-school students, demand for new facilities is not based solely on total school capacity but also on the geographic distribution of potential residential growth in relation to the distribution of school

capacity. If new residential development occurs where the capacity of nearby schools is limited, new school capacity also may be required.

The construction of new schools or alterations to existing schools could have environmental impacts, including potential disturbances or conversion of habitat, water pollution during construction, increased noise levels, and an increase in impermeable surfaces. The siting of new schools is regulated by the CDE. The California Education Code contains various provisions governing the siting of new public schools that require school districts to consider potential hazards to school occupants as well as other factors relevant to the public interest prior to the acquisition of a proposed school site. Although in many cases the avoidance or mitigation of hazards to school occupants would reduce impacts to the surrounding environment, the provisions of the California Education Code would not eliminate the potential for all construction-based or operational impacts of a new school.

In the event that the growth anticipated by the Project results in the need for new or expanded public school facilities, projects would be subject to CEQA requirements for environmental assessment, which would allow for the identification and consideration of potential impacts and mitigation, although compliance would not necessarily guarantee that significant impacts would be avoided or mitigated. New facilities would be located consistent with specified land use designations and would be subject to policies associated with the Project that would address potential impacts of siting, construction, and operation of new facilities to the extent assessed in other sections of this EIR. Proposed policies include those requiring construction best management practices to limit land disturbance, development review to protect significant biological resources, air pollution mitigation measures, promotion of water- and energy-efficient construction and landscaping, implementation of noise mitigation measures, and management of archaeological materials found during development.

Finally, both the LAUSD and the CUSD would continue to collect development impact fees throughout implementation of the Project, meaning future development would incrementally pay for any needed facility upgrades and expansions. The payment of statutory fees fully mitigates the impacts of development on school facilities for purposes of CEQA per SB 50.

Given that schools in the Planning Area have sufficient facility capacity to meet projected enrollment needs, that the development of new facilities would have minimal effects on the environment with compliance with existing regulations and the Project's proposed policies, and that all new development would pay school impact fees, the impact of the Project with respect to public school facilities is considered less than significant.

Parks

Project impacts related to park and recreation facilities is discussed in Section 3.14, *Recreation*, of this Draft EIR. As concluded in that section, the Project would not increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facilities would occur or be accelerated. In addition, the Project would not have a significant impact due to inclusion of recreational facilities or required construction or expansion of recreational facilities which might have an adverse physical effect on the

environment. As a result, the impact of the Project with respect to park and recreation facilities is considered less than significant.

Other Public Facilities

The anticipated growth associated with implementation of the Project may have an impact related to other public facilities, such as administrative facilities and libraries. The Project does not establish precise service standards for these other public facilities; rather, it includes policies that direct the City to provide facilities commensurate with new growth and demographic changes.

Should implementation of the Project result in the need for new public facilities, new projects would be subject to CEQA requirements for environmental assessment, which would allow for the identification and consideration of potential impacts and mitigation, although compliance would not necessarily guarantee that significant impacts would be avoided or mitigated. New facilities would be located consistent with specified land use designations and would be subject to policies in the Project. These policies would address potential impacts of siting, construction, and operation of new facilities to the extent assessed in other sections of this EIR. Proposed policies include those requiring construction best management practices to limit land disturbance, development review to protect significant biological resources, air pollution mitigation measures, promotion of water- and energy-efficient construction and landscaping, implementation of noise mitigation measures, and management of archaeological materials found during development.

Due to the minimal effects that the development of new facilities would have on the environment with compliance with existing regulations and proposed General Plan policies, the impact of the Project with respect to public facilities is considered less than significant.

Proposed General Plan Policies that Address the Impact

Community Services, Education, and Safety

Guiding Policies

- | | |
|----------|--|
| CSES-G-1 | Work with the Los Angeles Unified School District and other education providers to ensure educational facilities with sufficient permanent capacity are available to meet the needs of current and future projected enrollment. Consult with the school districts on policies and projects that affect the provision of educational facilities and services. |
| CSES-G-5 | Ensure library facilities in the city, and services and programs are adequate and appropriate to meet the community's needs for education and lifelong learning services and as a community gathering space. |
| CSES-G-6 | Promote an adequate and diverse supply of childcare facilities that are affordable and accessible for families, and provide safe, educational, and high-quality services for children. |
| CSES-G-8 | Continue to support and coordinate with the Los Angeles County police and fire services. |

Implementing Policies

- CSES-P-1 Support efforts by the Los Angeles Unified School District, Compton Unified School District, and childcare service providers to establish, maintain, and improve educational facilities and services to accommodate projected enrollment resulting from the city’s population growth and development.
- The General Plan projects that student enrollment will increase by 622 students and that there is sufficient capacity to meet Carson’s existing and future enrollment needs.
- CSES-P-5 Monitor library, community, and educational facilities and programs to expand as needed to commensurate with the city’s population growth.
- CSES-P-6 Coordinate with Los Angeles County Library to provide adequate library facilities and programs that align with the community’s learning needs, abilities and demographics, and changes in technology, such as through facility design, services and service delivery methods, and partnerships with educational and learning institutions.
- CSES-P-9 Continue to partner with local school districts to optimize the joint-use of school facilities for community use.
- CSES-P-13 Work with LASD to develop a Strategic Plan for the Carson Station on approaches to reduce crime, improve response time, maintain staffing needs, increase community collaboration to establish policing priorities, and foster a vibrant and resilient community.
- CSES-P-14 Continue to engage the Police and Fire Departments in the development review process to ensure that projects are designed and operated in a manner that minimizes the potential for criminal activity and fire hazards and maximizes the potential for responsive police and fire services.
- CSES-P-15 Apply Crime Prevention through Environmental Design principles in the design of new development and encourage the provision of adequate public lighting; windows overlooking streets or parking lots; and paths to increase pedestrian activity within private development projects and public facilities in order to enhance public safety and reduce calls for service.
- CSES-P-16 As part of Carson’s Public Safety Services Center, continue to employ community-based policing strategies and encourage the establishment of neighborhood watch programs in partnerships with community groups.
- CSES-P-25 Coordinate with other jurisdictions and agencies on disaster preparedness regarding heavy industrial uses, including incidents related to the transportation of hazardous materials, pipelines, oil fields, refineries, fires, and methane gas, among others.
- CSES-P-34 Continue coordination efforts with the LACFD to ensure their capability to address fires and other emergencies at refineries, tank farms, and other heavy industrial facilities within the city.

Mitigation Measures

None required.

3.13.5 Cumulative Impact Analysis

Fire Service

The geographic context for the cumulative analysis of fire protection is the service area of the LACFD, which includes both incorporated and unincorporated areas of Los Angeles County. A significant cumulative environmental impact would result if future growth in the county would exceed the ability of LACFD to adequately meet its commitments, thus requiring construction of new facilities or modification of existing facilities. Proposed General Plan policies related to fire prevention would help enhance public safety and keep service demand increases to a minimum. In addition, the Project promotes compact development patterns with infill development, thus ensuring that new development would be located close to existing fire stations. Therefore, the contribution of the Project to this impact would not be cumulatively considerable.

Police Service

The geographic context for the cumulative analysis of police service is the service area of the LASD, which includes both incorporated and unincorporated areas of Los Angeles County. A significant cumulative environmental impact would result if future growth in the county would exceed the ability of LASD to adequately meet its commitments, thus requiring construction of new facilities or modification of existing facilities. Proposed General Plan policies related to community involvement, education, and crime prevention strategies would help enhance public safety and keep service demand increases to a minimum. In addition, the Project promotes compact development patterns with infill development, thus ensuring that new development would be located close to existing police stations. As a result, the contribution of the Project to this impact would not be cumulatively considerable.

Schools

The geographic context for the cumulative analysis of schools is the boundaries of the LAUSD and CUSD. A significant cumulative environmental impact would result if future growth within these districts would exceed the ability of these districts to adequately meet the needs of its students, thus requiring construction of new facilities or modification of existing facilities. The increase in school enrollment generated by future growth under the Project would be very modest. As a result, future enrollment would continue to be below anticipated facility capacity. For this reason, the contribution of the Project to this impact would not be cumulatively considerable.

Parks

Cumulative impacts related to park and recreation facilities are discussed in Section 3.14, *Recreation*, of this Draft EIR. As concluded in that section, the Project's contribution to a cumulative impact with respect to the overuse and degradation of existing park facilities and the construction or expansion of additional parks and recreation facilities would not be cumulatively considerable.

Other Public Facilities

The geographic context for the cumulative analysis of other public facilities, such as libraries, is the service area of the Los Angeles County Library system, which includes both incorporated and unincorporated areas of Los Angeles County. A significant cumulative environmental impact would result if future growth in the county would exceed the ability of the library system to adequately serve its patrons, thus requiring construction of new facilities or modification of existing facilities. Population growth anticipated under the Project would not result in the need for new public facilities such as libraries, and new facilities would be subject to environmental review under CEQA, proposed General Plan land use designations, and proposed General Plan policies related to construction impacts. For this reason, the contribution of the Project to this impact would not be cumulatively considerable.

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3.14 Recreation

3.14.1 Introduction

This section provides an analysis of potential impacts on parks and recreational facilities and services from future development allowed under the Project. This sections also describes the existing park and recreation facilities in the Planning Area, as well as relevant federal, state, and local regulations and programs.

No comments were received in response to the Notice of Preparation (NOP) and Recirculated NOP regarding recreation.

3.14.2 Environmental Setting

Existing Facilities

The Planning Area has parks that are owned and maintained by the City of Carson (City), the County of Los Angeles, and by private entities. Existing parks and recreational facilities in the Planning Area are shown on **Figure 3.14-1, *Existing Parks and Recreation Facilities***. There are limited recreational facilities in the unincorporated portions of the Planning Area.

As of 2021, there are 23 parks in the city: four mini parks, 12 neighborhood parks, two regional parks owned by Los Angeles County, and five schools that have joint use agreements with the City to allow community members access to playgrounds, sports fields, and sports courts during non-school hours. Mini Parks are small parks that serve a limited area, often where land is not available for a neighborhood facility, whereas Neighborhood Parks are intended to serve one neighborhood or groups of neighborhoods, providing a wide range of active and passive recreational opportunities. There are also several private parks in the Planning Area, which are included in **Table 3.14-1, *Existing Parkland Inventory***.

Parkland Ratio

The City uses development impact fees as a funding mechanism to provide an adequate amount of parks and recreation facilities for Carson residents. Typically, the fees are determined by assessing the ratio of parkland acres per resident and seeking to improve or maintain this value, even as the number of residents increase with new development. The existing ratio is 1.9 acres per 1,000 residents, based on 174.8 acres of public parkland and an estimated population of 93,100 in the city of Carson.¹ Victoria Community Park is counted toward the parkland ratio because it functions similarly to City community parks; however, because current and anticipated future use of the 161.6-acre Victoria Golf Course is not free (semi-private), and the 6.7 acres of private parkland is not publicly accessible, these are not included in the parkland ratio.

The Project buildout projects a future population of 136,600 within the city of Carson. Based on the existing public parkland acreage in the city, an additional 84.7 acres would be required to meet the city's existing ratio of 1.9 acres per resident.

¹ California Department of Finance, 2020. Table E-5: Population and Housing Estimates for Cities, Counties, and the State, January 1, 2011–2020, with 2010 Benchmark.

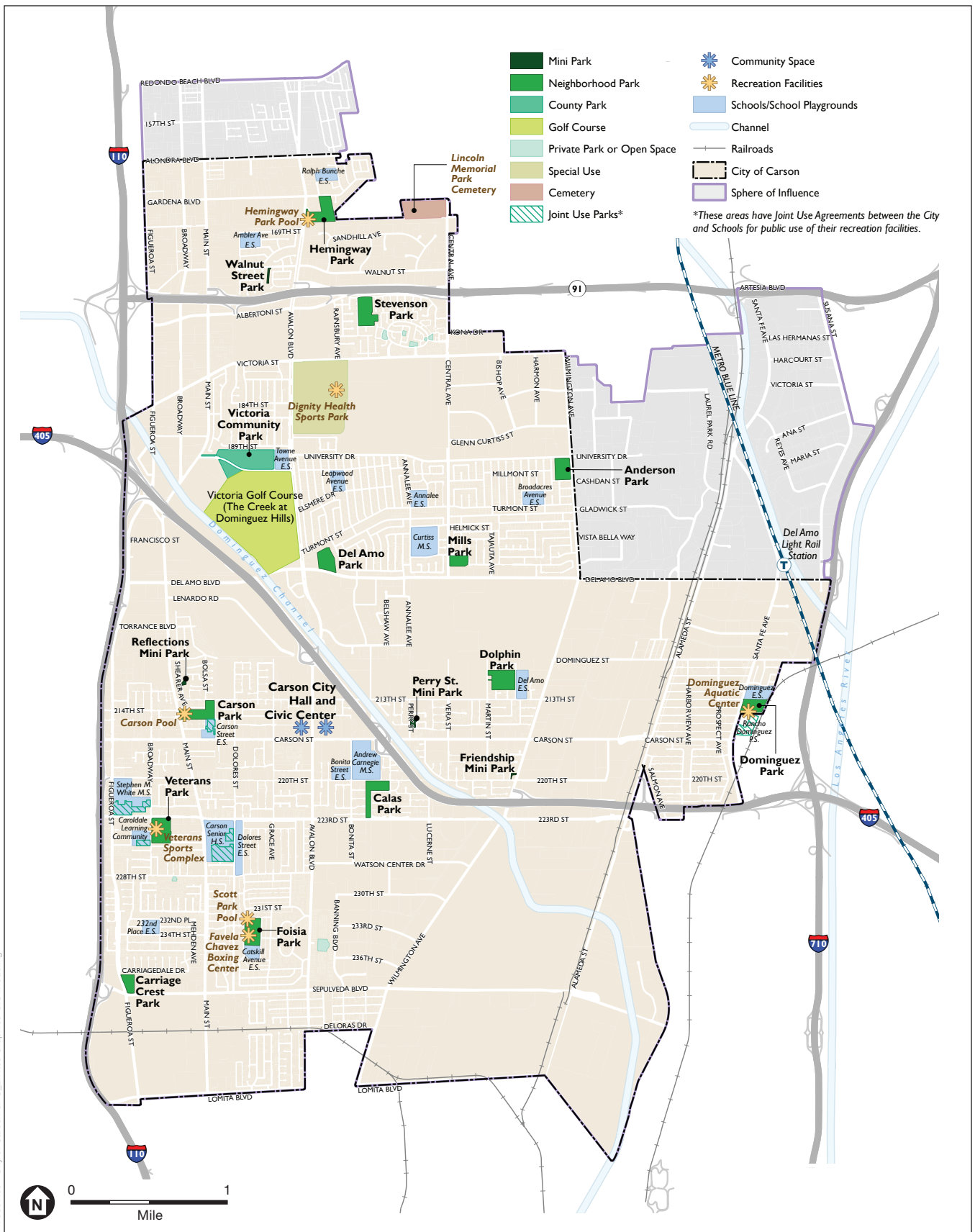
**TABLE 3.14-1
 EXISTING PARKLAND INVENTORY**

Park Name	Acreage
City of Carson Parks	117.3
Mini Parks	2.5
Friendship Mini Park	0.3
Perry Street Mini Park	1.2
Reflections Mini Park	0.4
Walnut Mini Park	0.7
Community Parks	114.7
Anderson Park	8.4
Calas Park	9.2
Carriage Crest Park	4.8
Carson Park	10.8
Del Amo Park	8.6
Dolphin Park	12.4
Dominguez Park	7.6
Foisia Park (formerly Scott Park)	11.3
Hemingway Park ¹	12.5
Mills Park	5.0
Stevenson Park	11.8
Veterans Park	12.3
Los Angeles County Parks and Recreational Facilities	191.6
Victoria Community Regional Park	30.0
Victoria Golf Course ²	161.6
Recreational Space at Schools with Joint-Use Agreements	27.5
Carson High School	11.0
Caroldale Learning Community	2.0
Rancho Dominguez Preparatory School	3.0
Carson Elementary School	2.5
Stephen White Elementary School	9.0
Private Parks³	6.7
Total	343.1
Public Parkland Total	174.8

NOTES:

- ¹ Hemingway Park acreage includes Hemingway Pool.
- ² The existing Victoria Golf Course is a public, pay-to-play golf course totaling 161.6 acres. Redevelopment is proposed for about 94 acres of the site as The Creek at Dominguez Hills, which is anticipated to be a semi-private, pay-to-play regional recreation facility. Because current and future use of this site is not free, the acreage is not included in the public parkland total in this table.
- ³ Private parks are Homeowner Association–owned open space or private gated parks in single-family residential developments.

SOURCE: City of Carson, 2022. Chapter 5: Recreation and Active Lifestyle. *Carson2040 General Plan*. Prepared by Dyett and Bhatia.



SOURCE: City of Carson, 2017; Los Angeles GIS Data Portal, 2017; Dyett & Bhatia, 2021

Carson General Plan Update

Figure 3.14-1
Existing Parks and Recreation Facilities



Other Public Recreational Facilities

The City of Carson’s Recreation Division offers classes, activities, and camps for residents of all ages. Programs include youth and adult sport leagues, computer classes, after-school programs, senior recreation programs, and day camps.

The City manages several recreational facilities, including pools, a sports complex, and a boxing center. Recreational facilities owned by the City of Carson are described in detail below:

- **Carson Park and Pool** has multiple indoor and outdoor recreational facilities including sports fields, basketball courts, a children’s play area, meeting/craft rooms, and volleyball courts. Carson Pool is adjacent to Carson Park. Its facilities include a six-lane pool with a half-meter diving board, as well as a building with lockers rooms and showers.
- **Dominguez Aquatic Center** is next to Dominguez Park. It features two pools, including a shallow “kiddie” pool and a larger “activity” pool. The “activity” pool contains a “catch” area for three waterslides. Dominguez Aquatic Center also has a building that provides locker rooms and showers.
- **Hemingway Aquatic Center** has three pools. The main “activity” pool is a six-lane pool with a diving board. The “catch” pool is the exit for two waterslides. The third “kiddie” pool is shallow and has spray features. The facility also has a small activity room and locker rooms and showers. Hemingway Aquatic Center is next to Hemingway Park along South Avalon Boulevard.
- **Foisia Pool** is a seven-lane pool with a diving board. The facility contains a structure with locker rooms and showers. The pool is situated next to Foisia Park.
- **Fabela Chavez Boxing and Fitness Center** is located on the grounds of Foisia Park. The facility contains a 20-foot by 20-foot boxing ring, punching bags, cardio equipment, and weight machines.
- **Stevenson Park Recreation Center** is located on the ground of Stevenson Park and includes a wading pool and a multi-purpose building. A separate facility includes a gymnasium with indoor basketball courts, community room with kitchen, fitness room, and meeting room.
- **Veterans SportsComplex** is located on the grounds of Veterans Park. Amenities at the SportsComplex include fitness centers, indoor basketball courts, racquetball courts, locker rooms and showers, an indoor cycling studio, meeting rooms, and a group exercise room. Access to these facilities is only available to SportsComplex members. Carson residents may become members for an annual or monthly fee, and non-residents may become members for a slightly higher annual or monthly fee. Members may participate in group exercise classes, youth classes, and nutritional counseling.

In addition, the City has a joint use agreement with the Los Angeles Unified School District (LAUSD), which allows for joint usage of City recreational facilities in exchange for usage of the LAUSD’s auditoriums, gyms, athletic fields, and community garden. The City also partners with California State University, Dominguez Hills, which allows the City to use its theater facility and conference rooms at a discounted rate. The California State University, Dominguez Hills campus also includes Dignity Health Sports Park, a multiple-use sports complex that includes the 27,000-seat Dignity Health Sports Park Soccer Stadium, the Dignity Health Sports Park Tennis Stadium, a track and field facility, and a velodrome. Dignity Health Sports Park Soccer Stadium, the largest

soccer-specific stadium in the U.S., has hosted the Women’s World Cup and is home to the LA Galaxy soccer team.

Bicycle Trail System

The Bicycle Trail System in Carson is divided into three classifications as follows:

- Class I bikeways (bike paths) are paved, off-street facilities with exclusive right-of-way, serving bicycles and pedestrians only. Also known as multi-purpose paths, they are usually formed parallel to waterways or railroad tracks.
- Class II bikeways (bike lanes) are on-street lanes reserved for the exclusive use of bicyclists. Bike lanes are painted (or striped) with a white line and stencil, and colored bike lanes are painted bright chartreuse green to enhance their visibility. Bike lanes that include additional space between the bike lane and auto-travel lanes or on-street parking are known as buffered bike lanes.
- Class III bikeways (bike routes) are shared facilities with motor vehicles on the street, with bicycle use as a secondary use. Bike routes serve bicyclists where a separate lane or path is not feasible or desirable and are often shared lanes on the rightmost side of the street. Typically, bike routes have been demarcated only with ‘Bike Route’ signs.

There are three Class I bikeways that run through or near the Planning Area—including the Dominguez Channel Bikeway, the Los Angeles River Bicycle Path, and the Compton Creek Bikeway—which are discussed in more detail in Section 4.15, *Transportation*, of this EIR.

County of Los Angeles Department of Parks and Recreation

DPR oversees the development, operation, and maintenance of 182 County parks and recreational facilities, comprised of approximately 70,000 acres of land located within cities and unincorporated areas throughout the County.^{2,3} Parks operated by DPR fall within two park systems: the local park system (parks that meet local needs such as community parks, neighborhood parks, and pocket parks) and the regional park system (parks that meet the needs of residents and visitors throughout the County, consisting of community regional parks, regional parks, and special use facilities). There are two County parks and recreation facilities within Carson:

- Victoria Golf Course is a public, pay-to-play golf course with 18 holes on a former 161.6-acre landfill located between Avalon Boulevard, the Dominguez Channel, Main Street, and East 192nd Street. Redevelopment of part of this site has been proposed (see future parks section below), which is anticipated to bring new recreational facilities and opportunities to Carson.
- Victoria Community Regional Park is located just north of the Victoria Golf Course across Martin Luther King Junior Street, this regional park is around 30 acres and has a variety of amenities, including ball fields, basketball courts, a swimming pool, a gymnasium, tennis courts, play area, a recreation building, and picnic areas among others.

² Los Angeles County Department of Parks and Recreation, 2018. Los Angeles County Parks and Recreation. <http://parks.lacounty.gov>. Accessed April 2021.

³ Los Angeles County, 2015a. Los Angeles County General Plan, October 6, 2015.

The Victoria Golf Course is categorized by the County as a Special Use Facility and is therefore part of the County’s regional park system. Special Use Facilities are defined in the County General Plan as “generally single purpose facilities that serve greater regional recreational or cultural needs” and “can meet both passive (e.g., historic and cultural facilities, natural areas, habitat preservation areas, arboreta and botanical gardens, and nature centers) and active (e.g., golf courses and driving ranges, equestrian centers, off-highway vehicle parks, water parks) needs within the region.” The County is also constructing a new park in unincorporated West Carson about one-half mile west of the Planning Area, called Wishing Tree Park. This park is currently under construction and will be eight acres in size.⁴

3.14.3 Regulatory Framework

This section provides the relevant state, regional, and local regulations applicable to the Project. There are no federal regulations which apply to the Project.

State

Quimby Act

California Government Code Section 66477, Subdivision Map Act, referred to as the Quimby Act, authorized cities and counties to pass ordinances requiring that developers set aside land, donate conservation easements, or pay park fees (often referred to as in-lieu fees) for park improvements. Under the Quimby Act, fees must be paid or land must be conveyed directly to the local public agencies that provide park and recreation services on a communitywide level; however, revenues generated through the Quimby Act cannot be used for the operation and maintenance of park facilities. The act states that the dedication requirement of parkland can be a minimum of three acres per 1,000 residents or equal to the existing parkland provision (up to five acres per 1,000 residents) if the existing ratio is greater than the minimum standard.

Although the City of Carson adopted a land dedication or fee requirement for park and recreation facilities under the Quimby Act in 1983, this section of the Carson Municipal Code was repealed in 2019 by Ordinance No. 19-1927, which instead establishes interim development impact fees as a funding mechanism for public facilities needs resulting from development.

Public Park Preservation Act

The primary instrument for protecting and preserving parkland is California’s Public Park Preservation Act of 1971, California Public Resources Code Sections 5400 through 5409 (the Act). Under the Public Park Preservation Act, cities and counties may not acquire any real property that is in use as a public park for any non-park use unless compensation, land, or both are provided to replace the parkland acquired. The Public Park Preservation Act only applies when a public agency both acquires real property that is in use as a public park and the public agency uses the property for non-park purposes.

⁴ Los Angeles County Department of Parks and Recreation, 2021. “Find a Park” and “New 8-Acre Park to be Built in West Carson.” <http://parks.lacounty.gov>. Accessed April 2021.

Regional

Proposition A Funds

Proposition A Funds may be used to fund the development, acquisition, improvement, restoration and maintenance of parks; recreational, cultural and community facilities; and open space lands. These funds are administered by the Los Angeles County Regional Park and Open Space District. The Open Space District was created when voters approved Proposition A in 1992. Proposition A authorized an annual assessment on nearly all of the 2.25 million parcels of real property in the county. Proposition A funded \$540 million for the acquisition, restoration or rehabilitation of real property for parks and park safety, senior recreation facilities, gang prevention, beaches, recreation, community or cultural facilities, trails, wildlife habitats, or natural lands, and maintenance and servicing of those projects. In 1996, voters approved another Proposition A to fund an additional \$319 million for parks and recreation projects and additional funds for maintenance and to service those projects.

Landscaping and Lighting Districts

The California Landscaping and Lighting Act of 1972 authorizes local legislative bodies to establish benefit related assessment districts, or Landscaping and Lighting Districts (LLADs), and to levy assessments for the construction, installation, and maintenance of certain public landscaping and lighting improvements. LLADs may be established to maintain local public parks.

Mello-Roos District

A developer may apply to the County to form a Mello-Roos District pursuant to the California Mello-Roos Community Facilities Act of 1982 to develop and maintain park improvements. Pursuant to County guidelines, the parks should be regional in nature, and have an impact or benefit beyond the associated subdivision.

Los Angeles County General Plan

The Los Angeles County General Plan applies to the unincorporated County land in the Planning Area. Chapters 10 and 13 address parks and recreation facilities. Policies related to these general plan elements include parkland classifications, parkland dedication requirements, funding mechanisms for the planning and development of recreational facilities, and issuance of development fees:^{5,6}

Policy P/R 1.5: Ensure that County parks and recreational facilities are clean, safe, inviting, usable, and accessible.

Policy P/R 1.7: Ensure adequate staffing, funding, and other resources to maintain satisfactory service levels at all County parks and recreational facilities.

Policy P/R 2.2: Establish new revenue generating mechanisms to leverage County resources to enhance existing recreational facilities and programs.

⁵ Los Angeles County, 2015b. Los Angeles County General Plan Chapter 10: Parks and Recreation Element. Online: http://planning.lacounty.gov/assets/upl/project/gp_final-general-plan-ch10.pdf. Accessed June 19, 2019.

⁶ Los Angeles County, 2015c. Los Angeles County General Plan Chapter 13: Public Services and Facilities Element. Online: http://planning.lacounty.gov/assets/upl/project/gp_final-general-plan-ch13.pdf. Accessed June 21, 2019.

Policy P/R 3.1: Acquire and develop local and regional parkland to meet the following County goals: 4 acres of parkland per 1,000 residents in the unincorporated areas and 6 acres of regional parkland per 1,000 residents of the total population of Los Angeles County.

Policy P/R 6.4: Ensure that new buildings on County Park properties are environmentally sustainable by reducing carbon footprints, and conserving water and energy.

Los Angeles Code of Ordinances

The Los Angeles County General Plan applies to the unincorporated County land in the Planning Area and contains provisions pertaining to park dedication. Title 21 – Subdivisions of the Los Angeles County General Plan contains information pertaining the dedication of private and public park sites and identifies when park fees are required.

Local

City of Carson Park Ordinance

Ordinance Nos. 95-1055, 95-1056, 95-1057, 95-1058, and Ordinance No. 41107 establish regulations for City of Carson owned and operated parks. All City-owned parks in the city of Carson are required to operate between the hours of 5:00 a.m. and 10:00 p.m., and all persons shall be prohibited to enter or remain in the park while it is closed, including vehicles. Additionally, all picnic shelters require a permit for use in order to facilitate enjoyment and ensure public health and safety. City parks being used by large groups of 25 or more are required to obtain a permit to utilize any portion of a park. Any amplified music would require a permit to operate in any City-operated park and would only be permitted between the hours of 10:00 a.m. and 7:00 p.m. during savings time and between 10:00 a.m. and 6:00 p.m. during standard time. In addition, smoking in all parks, playgrounds, and recreation centers, is prohibited.

The District at South Bay Specific Plan

The most recent amendment to The District at South Bay Specific Plan was adopted in 2018, and reflects updates to the details of the specific plan, including development of 1,250 residential units and 1.6 million square feet of retail, commercial, and hospitality uses. As of 2021, another amendment is proposed and would introduce new light industrial uses, along with up to approximately 12 acres of community-serving uses known as the “Carson Country Mart.” The Carson Country Mart would include recreational uses such as public plazas, a dog park, botanic gardens, a sculpture garden, and a performance pavilion area.⁷ Environmental impacts associated with this specific plan and its project components are subject to CEQA requirements and are assessed in its own EIR separate from this document. It is also noted that this project is expected to be privately owned and may have limited public access; therefore, it may not count toward future public parkland.

⁷ City of Carson, 2021. The District at South Bay 2021 – District 2021 Carson Country Mart. <https://ci.carson.ca.us/content/files/pdfs/planning/docs/projects/TheDistrict2021/District%202021%20Carson%20Country%20Mart.pdf>. Accessed October 2021.

3.14.4 Project Impact Analysis

Thresholds of Significance and Methodology

Thresholds of Significance

Appendix G of the State CEQA Guidelines provides screening questions that address potential impacts related to a number of environmental issues. The CEQA guidelines provides that lead agencies may use the questions set forth in the Appendix G to assess the significance of a project's environmental effects, and the use of Appendix G as a significance threshold is routinely sanctioned by the courts (although such use is not mandatory). Based on the Appendix G questions regarding parks and recreational facilities, a project would have a significant impact if the project would:

Threshold REC-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; or

Threshold REC-2: Include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment.

Methodology

As discussed in Chapter 2, *Project Description*, of this Draft EIR, this analysis uses a Planning Area buildout population estimate of 136,600 for the Project. The Planning Area includes the city of Carson and its unincorporated sphere of influence (SOI). In addition, this analysis uses the existing parkland ratio of 1.9 acres of parkland per 1,000 residents, which is equal to the proposed General Plan update's parkland standard. To project the amount of parkland required at buildout, the projected population at buildout in the Planning Area was divided by 1,000 and multiplied by 1.9 acres. The difference between this number and the existing amount of park acreage equals the area of new parkland needed to satisfy City park standards at buildout. An increase in population without progress toward meeting the standard would create a significant impact.

Project Impact Analysis

Deterioration of Existing Recreational Facilities

Threshold REC-1: The Project would have a significant impact if future development allowed by Carson2040 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.

Impact REC-1: *The Project would not increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated. (Less than Significant)*

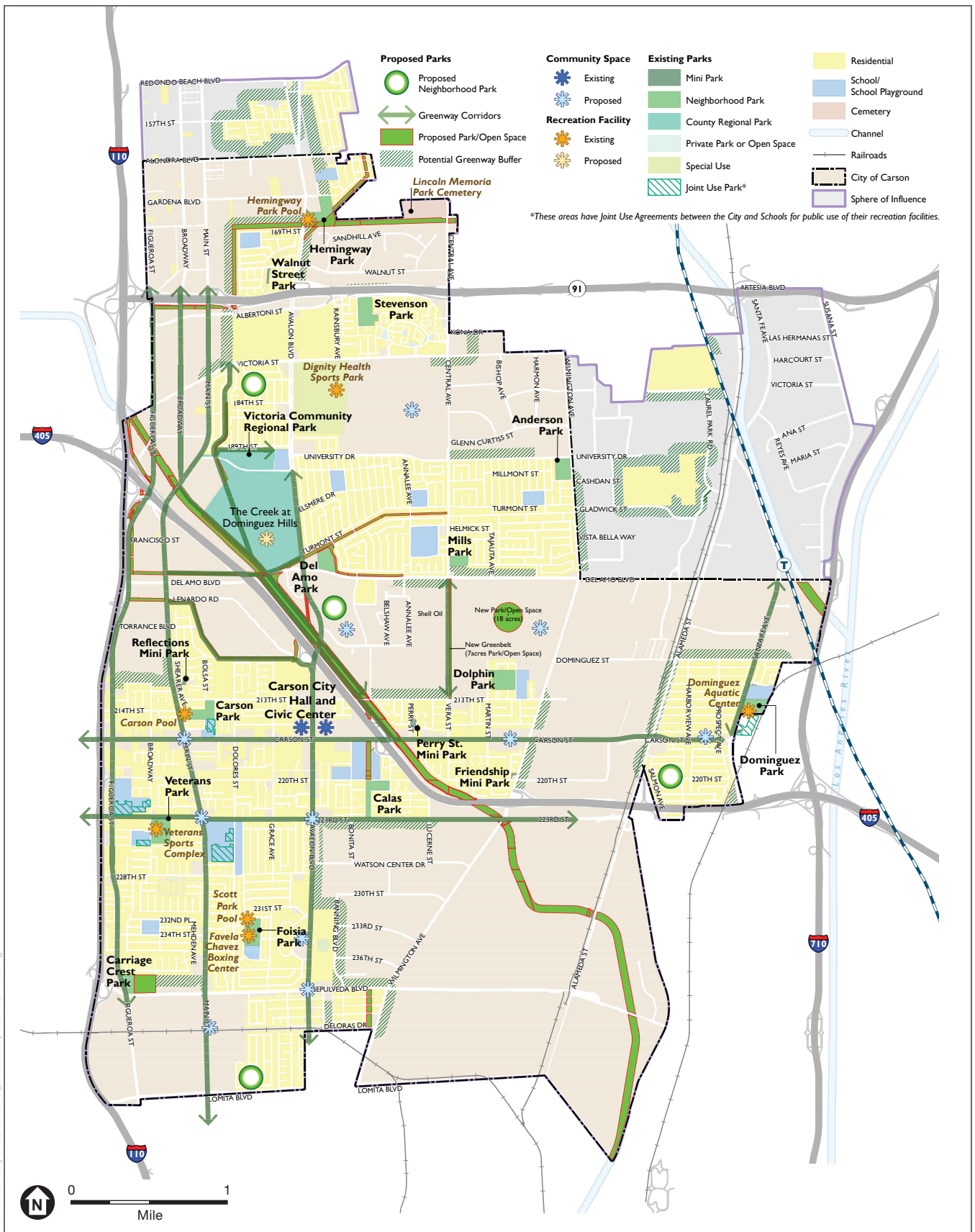
A significant amount of new parkland is expected to be added to the existing public parkland inventory, including greenways and parts of redeveloped industrial sites. The Shell property on

East Del Amo Boulevard and South Wilmington Avenue is a potential source of new parkland, including an approximately seven-acre greenway and at least 18 acres of community or neighborhood park. Additionally, the Project proposes some locations for future park additions—consisting of greenways within utility corridors, greenways along the Dominguez Channel, greenway corridors/boulevards, redevelopment of industrial or underutilized commercial sites, and new civic spaces as neighborhood nodes—that will be further refined in a Parks and Recreation Master Plan, as required by proposed policies. These locations are outlined in red in **Figure 3.14-2, *Proposed Parks and Recreation Facilities***. This map also identifies potential locations for a neighborhood park in underserved residential areas that are outside of the half-mile service area of any existing neighborhood park. Given these proposals, the City could add more than 180 acres⁸ of parkland to its inventory, which exceeds the 84.7 additional acres of parkland that the City would need to meet future demand, as discussed in Section 3.14.2, *Environmental Setting*; therefore, the Project would maintain the City’s existing parkland ratio of 1.9 acres per 1,000 residents.

The Project includes provisions to ensure ongoing expansion, investment in, and maintenance of public recreation facilities, thus minimizing substantial physical deterioration of existing or new facilities. Policies provided in the proposed General Plan update require the identification of funding, as well as development and maintenance of park impact fees, for the expansion and maintenance of parks, trails, and other recreational facilities and programs. The Project also seeks to develop future recreational facilities, such as by prioritizing the dedication of public parkland as a condition for new residential development, in response to the needs and preferences of the public by soliciting public opinion and ensuring that parks are distributed equitably throughout the city. Furthermore, the addition of new parks and recreational facilities that are proposed or underway—including The Creek at Dominguez Hills, Wishing Tree Park, and Carson Country Mart, as described in Section 3.14.2, *Environmental Setting*, and Section 3.14.3, *Regulatory Framework*—will help serve residents in the Planning Area, even if they are not counted toward public parkland.

Given that the Project would help reduce the likelihood that any existing neighborhood, community, or regional parks, or other recreational facilities would experience overuse that could result in the physical deterioration of those facilities and that proposed policies are designed to minimize the environmental impact of park and recreational facility development, including the development of design and site planning standards that consider energy and water efficiency, sustainable design elements, and habitat and cultural resource preservation, the impact associated with substantial physical deterioration of park and recreation facilities from increased demand would be less than significant.

⁸ The proposed greenways that are outlined in red in Figure 3.14-2, *Proposed Parks and Recreation Facilities*, amount to approximately 180 acres. Other additional parks, such as a new neighborhood park, would result in an even larger increase in parkland in the city.



SOURCE: City of Carson, 2017; Los Angeles GIS Data Portal, 2017; Dyett & Bhatia, 2021

Carson General Plan Update

Figure 3.14-2
Proposed Parks and Recreation Facilities



Proposed General Plan Policies that Address the Impact

Recreation and Active Lifestyle

Guiding Policies

- RAL-G-1 Maintain a high-quality, diversified park system that reflects Carson’s unique attributes and opportunities.
- RAL-G-2 Prioritize maintenance, design, and programming of existing facilities to meet the community’s evolving needs. Provide addition to the city’s existing parkland inventory through strategic park locations as larger sites are developed, and by developing greenways as recreation corridors and linkages to parks.
- RAL-G-3 Provide parkland for a comprehensive range of active recreational needs, including sports fields and facilities, and playgrounds, and open spaces for passive recreation.
- RAL-G-4 Support habitat creation, greenery, and bioremediation of landfills and industrial sites if redevelopment opportunities arise.
- RAL-G-5 Continue cooperative efforts with school districts through joint use agreements for park and recreational facilities.
- RAL-G-6 Minimize substitution of private recreation facilities in place of developer fee payment or park dedication to ensure that a public park system will be permanently available to the entire community.
- RAL-G-7 Ensure equitable distribution of parks and open space throughout the city and promote safe and accessible connections to accommodate a diversity of ages and abilities.

Implementing Policies

- RAL-P-1 Maintain a community and neighborhood parkland standard of 1.9 acres per 1,000 residents.
- RAL-P-2 Coordinate with the Public Works and Parks and Recreation departments to create a connected recreational trail system throughout the city by building out Greenways along major corridors, the Dominguez Channel, and utility rights-of-way, as feasible. This should be in coordination with a Trails Master Plan and Parks Master Plan to create a comprehensive recreational trail system.
- RAL-P-3 Consider access, park service levels, and facilities to meet the needs of the community’s diverse population in long range park planning, especially in areas targeted for infill and new development.
- RAL-P-4 Distribute parks equitably across all areas of the community, with a particular focus on neighborhoods located more than half mile from neighborhood parks.

Because the city is built out, future parkland opportunities would largely result from redevelopment of key major sites, which would result from private initiative, and thus the City may not be in position to finely distribute parkland sites so that parkland is fully evenly distributed throughout the community. Nonetheless, the need is particularly greater in neighborhoods that are more

than a half mile from any neighborhood park; these areas are shown on Figure 5-3.

- RAL-P-5 Strive to locate one or more larger parks in the city’s Core – roughly one-mile square area centered on Carson and Avalon Boulevards, given the extensive new housing occurring and planned to occur in this area.
- RAL-P-6 Develop and maintain a Parks and Recreation Master Plan or assess community needs and recreation preferences (such as needs of an increasingly aging population, desire for more active recreation such as running and bicycling), and identify priorities for park and recreation space development.
- The Parks and Recreation Master Plan should include:
- Detailed assessment of park and recreational assets, community needs and preferences (for both active and passive recreation), underserved locations, park usage, and a plan for new park locations, programs, and funding.
 - Assessment of needs of special user groups, such as the disabled, the elderly, low-income individuals, and underserved and at-risk youth, and address these in park and recreation facility development.
 - Park and recreation access and connectivity, including public transit, bicycle, and walkability.
- RAL-P-7 Examine opportunities for inclusion of parks, open space, and greenways or development of passive recreation and habitats as interim uses as part of environmental remediation of industrial sites. This is to be established during site review of redevelopment or site closing plans and will need to be proven safe.
- RAL-P-8 When light or heavy industrial areas are redeveloped adjacent to existing residential neighborhoods, a greenway buffer of trees and berms must be provided to help reduce noise, fumes, and aesthetic impacts to the community. If a new residential project is built next to an existing light or heavy industrial use, the greenway buffer shall be included in development plans. Also see the Land Use and Revitalization Element.
- RAL-P-9 At sites larger than 20 acres in size that are redeveloped with residential use as a component, require parkland dedication to meet City park standards. Where larger commercial or industrial uses are developed adjacent to residential uses, reserve right to acquire parkland or through a public/private partnership to fulfill City parkland needs.
- RAL-P-10 When planning Greenways, locate trail rights-of-way with consideration for safety, privacy, convenience, preservation of natural vegetation and topography, and impact on neighboring properties, and work with landowners on development proposals to incorporate and provide for a continuous multiuse trail system.
- RAL-P-11 Create a Greenway along the Dominguez Channel estuary that includes biking, walking, green space, lineal parks, and pocket parks. This will provide both a local and regional amenity and serve as a multimodal transportation system and provide community linkages and connectivity .Work with public agencies and

private entities for development and maintenance of trails in other rights-of-way and utility corridors.

RAL-P-12 Continue and seek partnerships with schools, Cal State Dominguez Hills, and private entities to establish joint usage of parks and facilities, enhance parkland provision and availability, and provide additional recreational opportunities for Carson residents.

RAL-P-13 Seek available state and federal grant assistance in implementing the parks and open space proposals of the General Plan.

RAL-P-14 Under a private/private partnership, support development of Civic Spaces in community nodes to foster new active gathering spaces.

Mitigation Measures

None required.

Require Construction or Expansion of Recreational Facilities

Threshold REC-2: The Project would have a significant impact if future development allowed by Carson2040 would include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment.

Impact REC-2: *The Project would not have a significant impact due to inclusion of recreational facilities or required construction or expansion of recreational facilities which might have an adverse physical effect on the environment. (Less than Significant)*

As stated under Impact REC-1, the proposed General Plan update anticipates the development of new parks and greenways throughout Carson. In addition, the Project calls for the continued support and adequate provision of civic spaces and recreational facilities in keeping with the needs and preferences of the population. Should any new recreational facilities need to be constructed in the future, construction of those facilities could result in environmental impacts, including potential disturbances or conversion of habitat, water pollution during construction, increased noise levels, and an increase in impermeable surfaces.

The Project seeks to develop future recreational facilities in order to meet the anticipated increase in demand due to projected population growth, such as by prioritizing the dedication of public parkland as a condition for new residential development, which will ensure that the City can maintain its existing parkland ratio. The addition of new recreational facilities that are proposed or underway—including The Creek at Dominguez Hills and Carson Country Mart, as described in Section 3.14.2, *Environmental Setting*, and Section 3.14.3, *Regulatory Framework*—will also help meet the needs of residents in the Planning Area, even if they are privately-owned spaces and therefore not counted toward public parkland.

New parks and recreational facilities would be subject to CEQA requirements for environmental assessment. Although compliance would not necessarily guarantee that significant impacts would be avoided or mitigated, it would allow for the identification and consideration of potential impacts and mitigation. The precise amount, type, and location of the new parks and recreational

facilities would be determined during the planning process for individual development projects or master/specific plans and would be consistent with the proposed land use designations and policies.

Proposed policies—including development of park and recreational facility design and planning standards that consider energy and water use efficiency and sensitive habitat preservation, and incorporate natural and/or drought-tolerant landscaping where reasonable; promotion of sustainable stormwater management through the construction of onsite green infrastructure; and provisions for the construction of infill development and preservation of open space and natural areas—are designed to minimize the environmental impact of development of new parks or recreational facilities.

Therefore, the impact associated with the construction or expansion of new recreation facilities would be less than significant with implementation of existing regulations and proposed General Plan policies.

Proposed General Plan Policies that Address the Impact

Guiding Policies RAL-G-1, RAL-G-2, RAL-G-3, RAL-G-4, RAL-G-5, RAL-G-6, and RAL-G-7, and Implementing Policies RAL-P-1, RAL-P-2, RAL-P-3, RAL-P-4, RAL-P-5, RAL-P-6, RAL-P-7, RAL-P-8, RAL-P-9, RAL-P-10, RAL-P-11, RAL-P-12, RAL-P-13, and RAL-P-14, as discussed under Impact REC-1, in addition to the following:

Community Character and Design

Implementing Policies

- CCD-P-6 Prepare a Greenway Corridors and Streetscape Plan to prioritize the development of streetscapes in Greenway Corridors (illustrated in Figure 4-5; additional street segments not shown in this figure may be included), in coordination with other City streetscape design and pedestrian realm improvement initiatives. The Plan should:
- a. Foster development of Greenway Corridors as tree-lined boulevards emphasizing:
 - Consistent species and regularly-spaced trees that promote street identity;
 - Closely spaced canopy trees in and around neighborhood centers to provide adequate shade;
 - Stormwater management through bioswales or rain gardens.
 - Wider sidewalks, with considerations for those that are mobility impaired;
 - Corner sidewalk bulb-outs, highly visible pedestrians crossings, and pedestrian safety islands where appropriate.
 - Bikeways, as shown in Carson 2040 General Plan Figure 3-3 and updated citywide Bicycle Master Plan when developed; and

- Pedestrian-scaled and attractive lighting, benches and other street furniture, and signage.
- b. Grow the tree canopy by maintaining existing trees and planting additional street trees where feasible. Develop regulations for tree canopy coverage of surface parking areas that are appropriate to use and location.
- c. Prioritize Greenway Corridors in high-activity areas, such as within the Core and along the residential neighborhoods, active commercial areas, Neighborhood Villages, or major transportation corridors.

Community Health and Environmental Justice

Implementing Policies

CHE-P-29 Seek to plant tree species that balance sustainability and heat mitigation potential such as those that are drought-tolerant, pest-resistant, and maximize shade.

Open Space and Environmental Conservation

Guiding Policies

OSEC-G-1 Maintain a balanced and integrated open space system reflecting a variety of considerations—resource conservation, production of resources, recreation, and aesthetic and community identity—and ensuring synergies between various open space components and compatibility with land use planning.

OSEC-G-2 Seek opportunities for the restoration of natural open space during redevelopment of industrial or remediated landfills—including land currently used to produce resources—to create open space that supports outdoor recreation, protects public health and safety, and improves plant and animal habitat.

OSEC-G-3 Support efforts to improve the biodiversity of plant and animal habitats within Carson by creating natural habitat areas when feasible. Support efforts to restore channelized creeks to naturalized flows, with supportive open space development that promotes healthy riparian habitat.

Implementing Policies

OSEC-P-7 Provide ongoing education for property owners, businesses, and developers regarding landscape, maintenance and irrigation practices that promote habitat creation for wildlife species and improving the urban forest.

Mitigation Measures

None required.

3.14.5 Cumulative Impact Analysis

The geographic context for the analysis of cumulative impacts associated with parks and recreational facilities is the South Bay region of southern Los Angeles County. Future development in the area, including future development allowed under the proposed General Plan update, could have an adverse effect on existing parks and recreational facilities in the region, and thus could result in a potentially significant cumulative impact with respect to the overuse and degradation of existing park facilities. Future development and population growth anticipated by

the proposed General Plan update would generate additional demand for public services and public facilities including parks and recreational facilities. The city currently has a ratio of about 1.9 park acres per 1,000 residents which is maintained as the standard in the proposed General Plan update. The City meets this measurement in 2021, and potential park locations identified by the proposed General Plan update would allow the City to maintain their target of 1.9 acres of parkland per 1,000 residents through 2040. Therefore, the Project's contribution to this cumulative impact would not be cumulatively considerable.

Demand for parks and recreation facilities due to future development in the area, including future development allowed under the proposed General Plan update, could result in the construction or expansion of additional parks and recreational facilities, the construction of which might have adverse physical effects on the environment. As a result, the construction or expansion of additional parks and recreation facilities could result in a potentially significant cumulative impact. The proposed General Plan update contains plans for additional recreational facilities in the Planning Area in keeping with the needs and preferences of the population. All new facilities would be subject to CEQA guidelines, proposed General Plan land use designations, and proposed General Plan policies related to construction impacts. Elements of the proposed General Plan update are designed to minimize potentially cumulatively considerable environmental impacts of new development, including developing and sustainable park and recreational facility design and planning standards. Therefore, the Project's contribution to this cumulative impact would not be cumulatively considerable.

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3.15 Transportation

3.15.1 Introduction

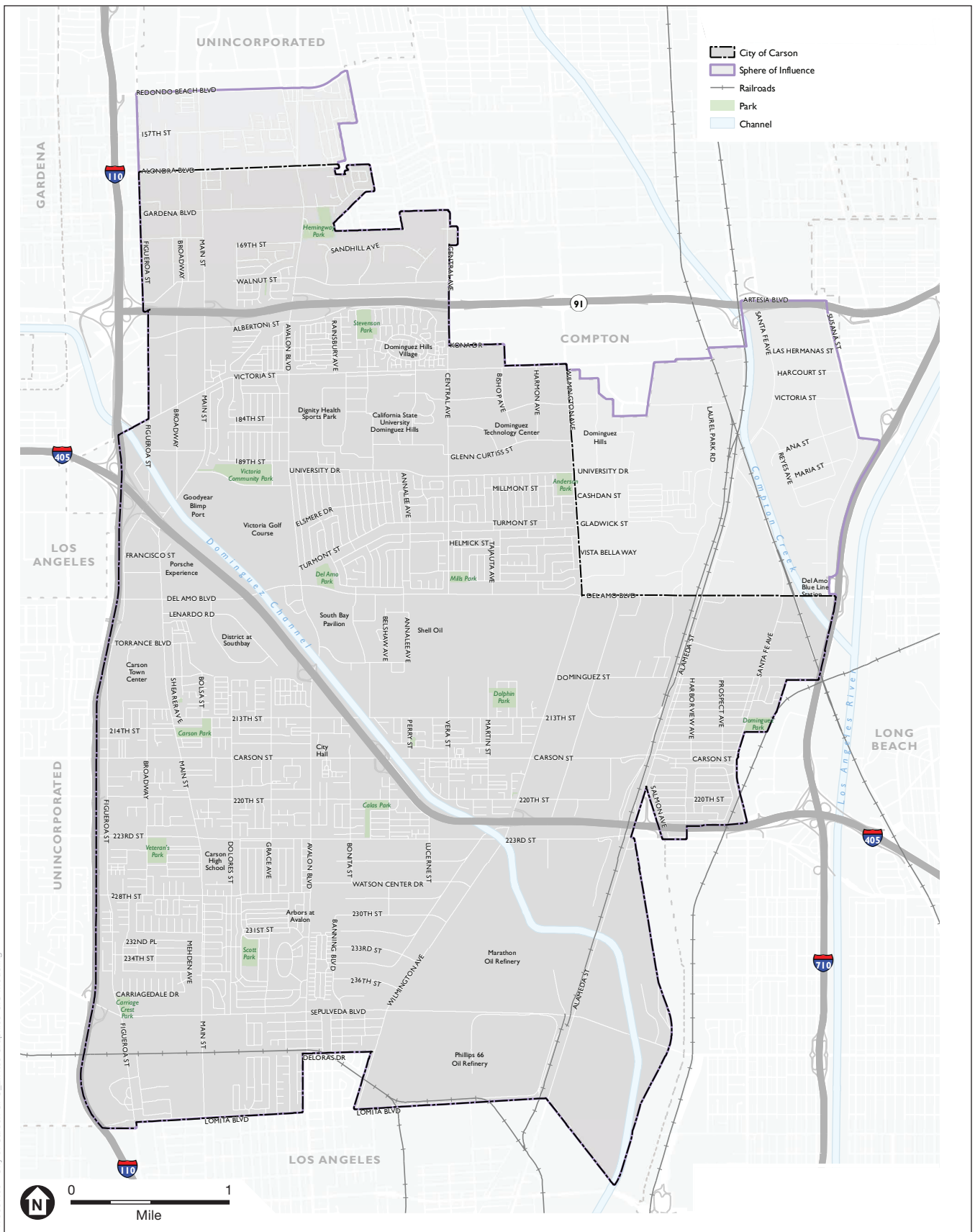
This section provides an analysis of potential environmental impacts on the regional and local transportation system from future development allowed under the Project, including those related to vehicle miles traveled (VMT), roadway hazards, emergency access, and public transit, bicycle, and pedestrian facilities in the Planning Area. The section provides context regarding the Planning Area's existing transportation system, as well as relevant federal, state, and local regulations and programs. An overview of the modeling approach and results is provided in Appendix F.

Comments received in response to the Notice of Preparation (NOP) and Recirculated NOP regarding topics covered in this section include the following:

- Comments reminding the City of Carson (City) that Senate Bill (SB) 743 mandates that CEQA review of transportation impacts of proposed developments use VMT as the standard transportation analysis metric.
- Commentors also encouraged the City to evaluate the potential of strategies such as Transportation Demand Management (TDM) and Intelligent Transportation System (ITS) applications to better manage travel and the transportation network.
- Comments recommended the Project and Program EIR review transit services provided by Metro and other transit operators serving the city, and that the Project include policies to enhance access and use of public transit, including planning resources to aid in the development of transit supportive planning in the Project.
- The California Department of Transportation (Caltrans) acknowledged the challenges in alleviating congestion and recommended the Project include multi-modal and complete streets transportation elements that actively promote alternatives to car use and better manage existing parking assets. The City should be mindful of the role parking plays in generating automobile travel and consider alternative measures that allow developments to reduce the amount of parking provided. Incorporating multi-modal safety measures that enhance conditions for all road users should be strongly considered.

3.15.2 Environmental Setting

The Planning Area, as shown in **Figure 3.15-1, *Planning Area***, includes the city of Carson and its unincorporated sphere of influence (SOI). As shown in the figure, the Planning Area is bounded by East Alondra Boulevard and the city of Compton to the north, the city of Long Beach to the east, the Los Angeles neighborhood of Wilmington to the south, and Interstate 110 (I-110) and South Figueroa Street to the west. The SOI includes a portion of unincorporated Los Angeles County, located in the northeast section of the Planning Area north of Del Amo Boulevard and east of Wilmington Avenue. The SOI is defined as the ultimate physical boundary and service area of the city, and it encompasses territory that is envisioned to become the city's service area. The Local Agency Formation Commission for the County of Los Angeles (LAFCO) has jurisdiction over defining Carson's SOI and acts on annexations.



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SOURCE: Dyett & Bhatia, 2021

Carson General Plan Update

Figure 3.15-1
Planning Area



The Planning Area comprises approximately 12,120 acres, or about 18.9 square miles, including the city of Carson (10,151 acres) as well as 1,969 acres of unincorporated land within the city’s SOI. Nearly half (47.2 percent) of the Planning Area is zoned for industrial uses, followed by 25.5 percent for residential uses, 10.3 percent for parks, recreation, public, and community facilities, and 5.5 percent for commercial uses. The remaining 11.5 percent consists of vacant, right-of-way, and other uses.

Existing Circulation System

The existing circulation system in Carson consists of various roadway types designated as Major Highways/Arterials, Secondary Highways/Minor Arterials, Collector Streets, and Local Streets. The city also has publicly accessible parking lots, sidewalks, on- and off-street bike facilities, and public transportation facilities. The city of Carson is well connected with other parts of Los Angeles County and neighboring communities. State Route 91 (SR-91), also known as the Artesia Freeway, and Interstate 405 (I-405) both traverse through Carson and Interstate (I-110) and Interstate (I-710) are located just outside the city boundaries.

The existing street network is a modified grid system of north/south and east/west roadways. The primary north/south roadways are Figueroa Street, Broadway, Main Street, Avalon Boulevard, Central Avenue, Wilmington Avenue, Alameda Street, and Santa Fe Avenue. The primary east/west streets are Alondra Boulevard, Gardena Boulevard, Artesia Boulevard, Albertoni Street, Walnut Street, Victoria Street, University Drive, Del Amo Boulevard, Carson Street, 223rd Street, Sepulveda Boulevard and Lomita Boulevard. Further details about the road network, including street classifications, number of lanes, roadway widths and right-of-way dimensions, are described in **Table 3.15-1, Street Classifications and Characteristics of Carson Streets**. The street classification system is shown in **Figure 3.15-2, City of Carson Street Classifications**.

**TABLE 3.15-1
STREET CLASSIFICATIONS AND CHARACTERISTICS OF CARSON STREETS**

Street Name	Segment	Classification ^a	No. of Lanes Each Direction ^b	Right-of-Way (feet) ^c	Roadway Width (feet) ^c
192nd Street	Main Street to Avalon Boulevard	Collector	1	80	64
213th Street	Main Street to Avalon Boulevard	Collector	1	50–60	24–40
213th Street	405 Freeway to Wilmington Avenue	Collector	1	50–60	40
213th Street	Avalon Boulevard to 405 Freeway	Collector	1	50–70	24–30
214th Street	Figueroa Street to Main Street	Collector	1	60	30–36
220th Street	Vera Street to Wilmington Avenue	Collector	1	50–60	24–40
220th Street	Figueroa Street to Lucerne Street	Collector	1	46–60	32–40
223rd Street	West City Limit to East City Limit	Major Highway	2	42–116	28–84
228th Street	West City Limit to Avalon Boulevard	Collector	1	33–60	28–40
234th Street	Figueroa Street to Main Street	Collector	1	60	36
Acarus Avenue	Vera Street to Carson Street	Collector	1	60	40
Alameda Street	Lomita Boulevard to Del Amo Boulevard	Major Highway	1	50–145	44–114

Street Name	Segment	Classification ^a	No. of Lanes Each Direction ^b	Right-of-Way (feet) ^c	Roadway Width (feet) ^c
Albertoni Street	Figueroa Street to Sudbury Drive	Secondary Highway	2	100	84
Albertoni Street	Sudbury Drive to Central Avenue	Collector	2	60	34
Alondra Boulevard	Figueroa Street to East City Limit	Major Highway	2, 3 ^d	100	80
Artesia Boulevard (East)	Avalon Boulevard to Central Avenue	Collector	1	48	34
Avalon Boulevard	South City Limits to Alondra Boulevard	Major Highway	2	47–150	28–130
Bonita Street	Watson Center Road to Carson Street	Collector	1	57–80	35–60
Carson Street	West City Limit to Santa Fe Avenue	Major Highway	2	83–100	44–86
Central Avenue	Del Amo Boulevard to North City Limits	Major Highway	2	40–100	20–84
Del Amo Boulevard	West City Limit to East City Limit	Major Highway	1, 2 ^d	100–108	44–90
Dolores Street	Sepulveda Boulevard to 213th Street	Collector	1	50–80	18–60
Dominguez Street	Wilmington Avenue to Santa Fe Avenue	Collector	1, 2 ^d	66–84	30–68
Figueroa Street	South City Limits to Alondra Boulevard	Major Highway	2	100–200	40–84
Gardena Boulevard	Figueroa Street to Avalon Boulevard	Secondary Highway	2	60–80	16–64
Grace Avenue	228th Street to 213th Street	Collector	1	55–60	23–40
Lomita Boulevard	West City Limit to City West of Avalon Boulevard	Major Highway	2	100–182	80–84
Lomita Boulevard	Wilmington Avenue to Alameda Street	Major Highway	1	100–810	22–82
Lucerne Street	Watson Center Road to 220th Street	Collector	1	50–80	26–60
Main Street	Lomita Boulevard to Alondra Boulevard	Major Highway	2	80–100	40–84
Martin Street	Carson Street to 213th Street	Collector	1	50–60	28–40
Moneta Avenue	228th Street to 214th Street	Collector	1	60	40
Santa Fe Avenue	405 Freeway to Del Amo Boulevard	Secondary Highway	2	80–112	44–84
Sepulveda Boulevard	West City Limit to East City Limit	Major Highway	1, 2, 3 ^d	50–100	36–88
University Drive	Avalon Boulevard to Wilmington Avenue	Secondary Highway	1, 2 ^d	100	80
Vera Street	Carson Street to 213th Street	Collector	1	60	21
Victoria Street	West City Limit to Wilmington Avenue	Major Highway	1, 2 ^d	66–100	20–84
Walnut Street ^e	Figueroa Street to Main Street	Collector	1	50	30
Walnut Street (East)	Avalon Boulevard to Central Avenue	Secondary Highway	2	80	64
Watson Center Road	Avalon Boulevard to Wilmington Avenue	Collector	1	80	60
Wilmington Avenue	Lomita Boulevard to Victoria Street	Major Highway	2	66–145	26–105

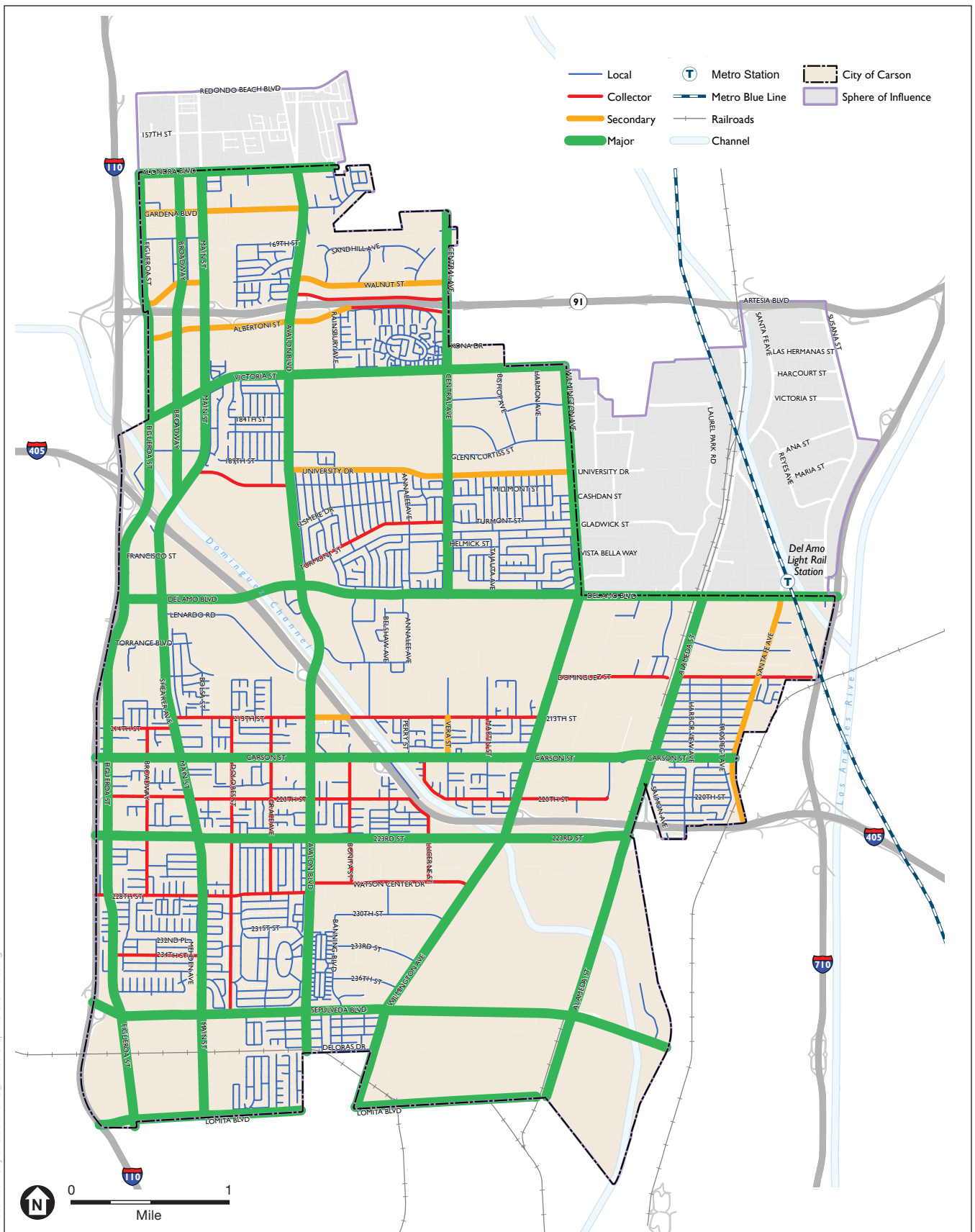
^a Source: City of Carson, 1982. Master Plan of Highways, amended May 17, 1982.

^b Source: South Bay Council of Governments, 2021. Subregional Model Database and field observation.

^c Source: Los Angeles County Roads Department, 2021. Classification of road Surfaces Database.

^d Number of lanes varies

^e Downgraded to Collector Street per Resolution No. 85-020, General Plan Amendment on February 4, 1985.



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SOURCE: Fehr & Peers, 2021

Carson General Plan Update

Figure 3.15-2
City of Carson Street Classifications



Freeways

With the Artesia Freeway (SR-91) to the north, the Long Beach Freeway (I-710) to the east, the Harbor Freeway (I-110) to the west and the San Diego Freeway (I-405) passing through the center of the city, the city of Carson is served by a regional roadway network. Access to the freeways is provided via an extensive freeway ramp system connecting the city's major arterials to the freeways.

Major Highways/Arterials

Major highways are streets that carry both local and through traffic and are designed and operated to serve the highest volumes of vehicle traffic in the city. They provide limited access to adjacent land uses. Some major highways also function as multi-modal corridors that serve key transit routes, emergency response routes, provide dedicated pedestrian and/or bicycle facilities, and may also serve as truck routes. North/south major highways include Figueroa Street, Main Street, Avalon Boulevard, Central Avenue, Wilmington Avenue, and Alameda Street. Major highways running east/west include Alondra Boulevard, Victoria Street, Del Amo Boulevard, Carson Street, 223rd Street, Sepulveda Boulevard, and Lomita Boulevard.

Secondary Highways/Arterials

Secondary highways also carry both local and through traffic. However, they generally serve shorter trips and provide access to adjacent land uses and numerous destinations in Carson. These streets can serve as local transit corridors and may include designated bicycle facilities and sidewalks for pedestrian routes in the city. Santa Fe Street is the only secondary north/south street. Secondary east/west streets include Gardena Boulevard, Albertoni Street, a section of 213th Street, and University Drive.

Collector Streets

Collector streets connect busier major and secondary highways/arterials with local streets, neighborhoods, and to commercial and other districts. These streets typically provide a cross-section with two travel lanes total (one in each direction) and on-street parking (some sections provide four lanes or do not include parking). Examples of collectors include sections of 213th Street, Dolores Street, Artesia Boulevard, and 228th Street.

Local Streets

Local streets are exactly that – they serve local land uses, which typically includes residential but can also include industrial and/or commercial uses. Local streets carry low traffic volumes. All other streets not classified in the categories described above are local streets.

Existing Transit System

Several transit agencies provide local and regional transit service to the residents of Carson, including Metro, Long Beach Transit, Compton Renaissance Transit, Gardena Transit, and Torrance Transit. The City of Carson provided a service called the Carson Circuit; however, it was discontinued during the COVID-19 pandemic and the City has instead offered Dial-A-Ride services for all adult Carson residents.

Several routes in Carson provide access to the Metro A (Blue) Line, which passes through the eastern edge of Carson without stops. The A Line provides service at six-minute intervals during peak times and at 12-minute intervals during off-peak times and on weekends, traveling north to downtown Los Angeles and south to downtown Long Beach. There are three A Line stations near Carson that can be accessed by bus routes; these include the Compton A Line Station, Artesia A Line Station, and Del Amo A Line Station. Compton Renaissance Transit Route 5 connects to both the Compton A Line Station and the Artesia A Line Station. Gardena Transit Route 3 also connects to the Compton A Line Station, Long Beach Transit Route 1 connects to the Del Amo A Line Station, and Torrance Transit Route 6 connects to the Artesia A Line Station.

The Harbor Gateway Transit Center is located just west of the city, adjacent to I-110. This transit center is a stop on the Metro Silver Line, which provides critical regional access to downtown Los Angeles and east to the El Monte Station. Connection to the Transit Center is provided by Metro Line 246.

Both Long Beach Transit and Torrance Transit provide access to Long Beach, including the Long Beach Transit Gallery, located at the downtown Long Beach A Line station. Torrance Transit also provides access to the South Bay, including to the South Bay Galleria Transit Center and the Redondo Beach Pier.

The Metro Local buses that serve Carson provide access to a variety of regional locations, including downtown Los Angeles, San Pedro, Koreatown, and Lincoln Heights. Some of the Metro bus lines that service Carson have been modified under the NextGen Bus Plan. These changes are reflected in the operational information summarized in **Table 3.15-2, *Transit Service in Carson***, and the routes are shown in **Figure 3.15-3, *Existing and Proposed Transit Routes***.

Existing Alternative Transportation Facilities

Pedestrian Facilities.

Pedestrian circulation and access is primarily provided through sidewalks. Sidewalks are found on most streets throughout the Planning Area except for some neighborhoods and industrial areas. Pedestrian crosswalks are provided at signalized and, occasionally, unsignalized intersections.

Bicycle Facilities.

Bicycle circulation is provided largely through on-street bike lanes. Bicycle facilities are classified as follows:

- Class I – separate off-road bikeway or path dedicated exclusively for bicycles and pedestrians.
- Class II – on-road lane within the right-of-way with painted lines and signage;
- Class III – designated on-road routes for bicycles that are not marked and share the roadway with cars;
- Class IV – designated for the exclusive use by bicyclists, these facilities are physically separated from vehicular traffic with a vertical feature such as flexible posts, curbs, or on-street parking.

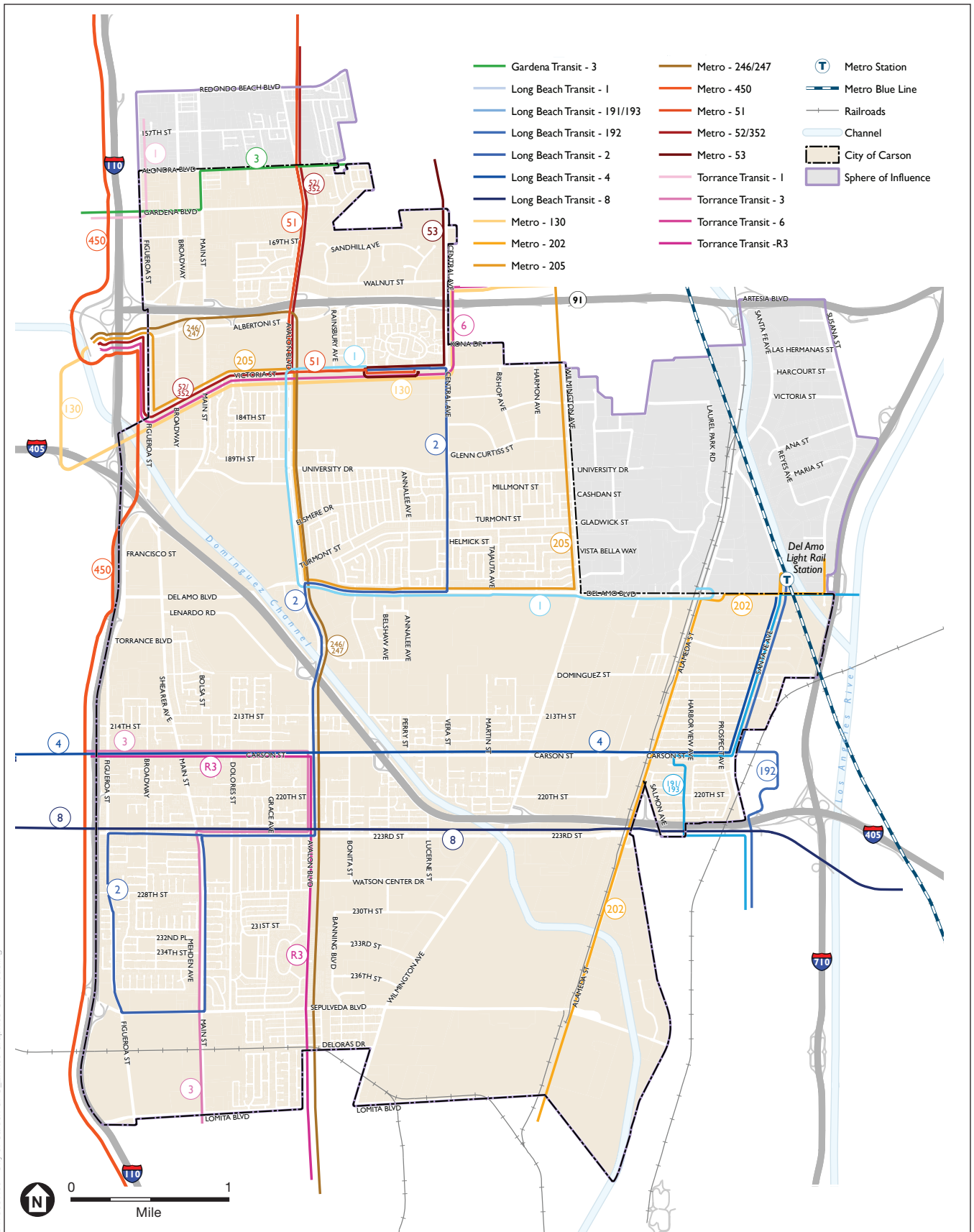
**TABLE 3.15-2
 TRANSIT SERVICE IN CARSON**

Provider	Line	Origin	Destination	Frequency in minutes
Metro Local/Limited	51	Wilshire Center	MLK Transit Center/ Compton Station	7.5 peak ^a and midday, ^a 20–30 evening, ^a 60 late night ^a
	53	Cal State Dominguez Hills	Downtown Los Angeles	10 peak and midday, 20–30 evening
	130	Los Cerritos Center	South Bay Galleria Transit Center	30 peak and midday, 30–60 evening
	202	Willowbrook/Rosa Parks Station	Del Amo Station	60 peak
	205	Willowbrook/Rosa Parks Station	San Pedro Waterfront	30 peak and midday, 30–60 evening
	246	Harbor Gateway Transit Center	Point Fermin Park and Historic Lighthouse	30 peak and midday, 30–60 evening
Metro Silver Line	450	San Pedro	El Monte Station	20 peak, 30 off-peak
	910	Harbor Gateway Transit Center	El Monte Station	5 peak, 10 off-peak, 15–30 late night
Torrance Transit	3	Redondo Beach	Downtown Long Beach Station	20 peak, 30 off-peak
	3 – Rapid	South Bay Galleria Transit Center	Downtown Long Beach Station	20 peak, no service mid-day
	6	Carson Street and Hawthorne Boulevard Hub	Artesia Transit Center	40 peak and off-peak
	7	Redondo Beach Pier	Southern California Regional Occupational Center	60 peak and off-peak
	9	Del Amo Mall	Lomita City Hall	60 peak and off-peak
Long Beach Transit ^b	1	Cal State Dominguez Hills	Long Beach Transit Gallery	45 peak and off-peak
	2	Cal State Dominguez Hills	Carson High School	40 peak and off-peak
	4	Harbor UCLA Medical Center	Del Amo Blue Line Station	40 peak and off-peak
	8	Harbor UCLA Medical Center	Wardlow Blue Line Station	40 peak and off-peak
	104	Long Beach Airport	UCLA (via I-405)	45 peak and off-peak
	191	Los Cerritos Center	Long Beach Transit Gallery	30 peak and off-peak
	192	Artesia High School	Long Beach Transit Gallery	30 peak and off-peak
Compton Renaissance Transit	3	South Bay Galleria Transit Center	Compton Transit Center	40 peak and off-peak
Compton Renaissance Transit	5	Compton Transit Center	California State Dominguez Hills	40 peak and off-peak
Gardena Transit	3	South Bay Galleria Transit Center	MLK Transit Center	15 peak, 30 off-peak

^a Peak: 6–9am/3–7pm, Midday: 9am–3pm, Evening: 7pm–12am

^b Long Beach Transit schedules reflect modified COVID-19 pandemic service.

SOURCE: Los Angeles County Metropolitan Authority, 2021. Torrance Transit, Long Beach Transit, Compton Renaissance Transit, and Gardena Transit.



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SOURCE: Fehr & Peers, 2021

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Figure 3.15-3
Existing and Proposed Transit Routes



There are three Class I bikeways that run through or near the Planning Area, including the Dominguez Channel Bikeway, the Los Angeles River Bicycle Path, and the Compton Creek Bikeway. Several key arterials within the Planning Area are served by Class II unprotected bike lanes. These streets include segments of University Drive, Del Amo Boulevard, Central Avenue, Lomita Boulevard, Delores Street, Leapwood Avenue, and Chico Street. Several streets within the Planning Area are designated as Class III bike routes and provide an opportunity for people riding bicycles and people driving cars to share the road. In total, the Planning Area's bicycle facilities make up a network that is 13.3 miles long. Existing bikeways (2021 conditions) and bikeways proposed under the Carson Master Plan of Bikeways are shown in **Figure 3.15-4, Existing and Proposed Bicycle Facilities**.

3.15.3 Regulatory Framework

Federal

America's Transportation Infrastructure Act of 2019

America's Transportation Infrastructure Act of 2019 authorizes \$287 billion for the Highway Trust Fund over five years in investments to maintain and repair America's roads and bridges. The legislation includes provisions to improve road safety, accelerate project delivery, improve resiliency to disasters, reduce highway emissions, and grow the economy.

State

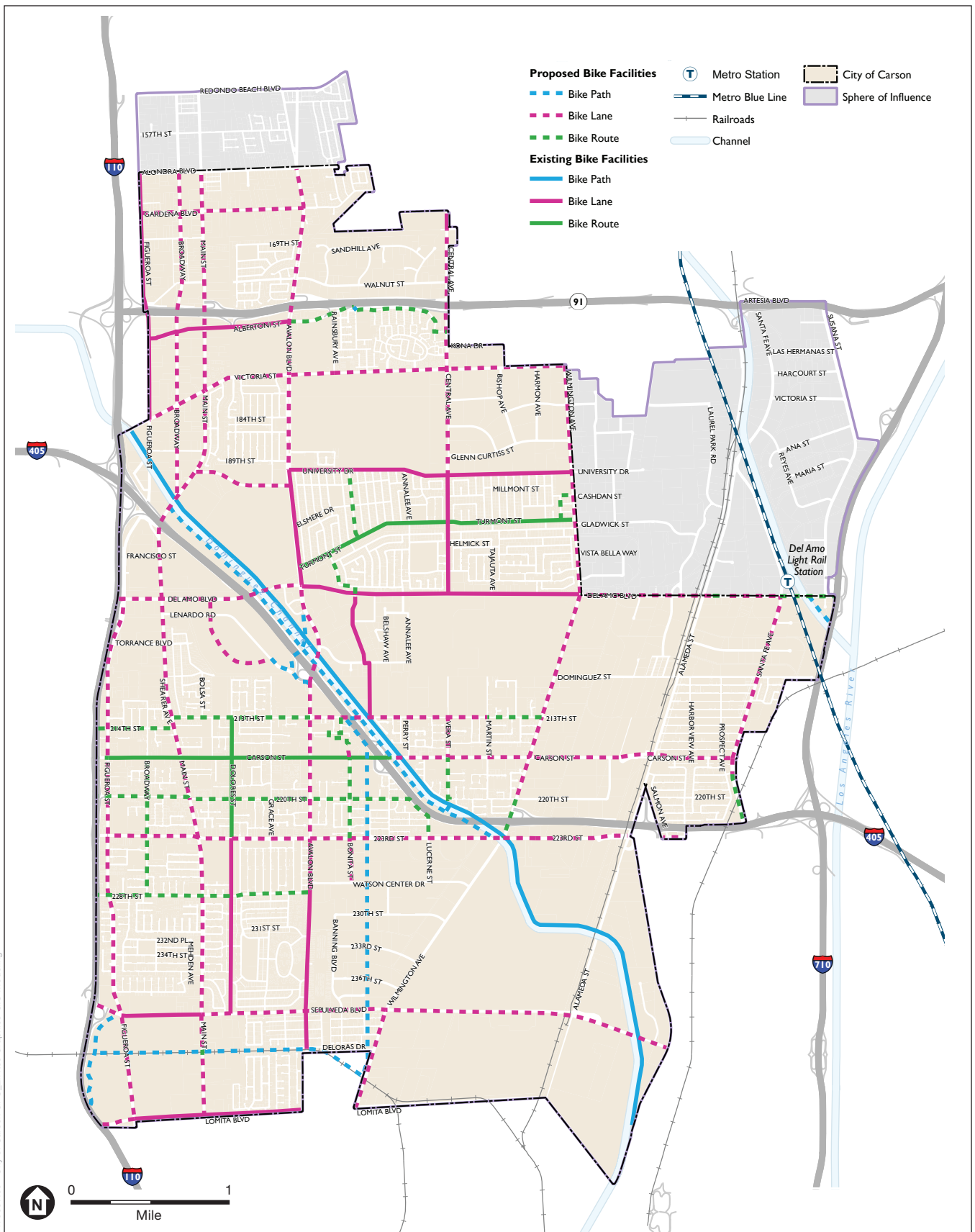
California Department of Transportation

The California Department of Transportation (Caltrans) implements state planning priorities in all plans, programs, and activities. Caltrans has the responsibility to coordinate and consult with local jurisdictions when proposed local land use planning and development may impact state highway facilities. Pursuant to Public Resources Code § 21092.4, for projects of statewide, regional, or area-wide significance, the lead agency must consult with transportation planning agencies and public agencies that have transportation facilities which could be affected by a project.

Assembly Bill 32/Senate Bill 32

On September 27, 2006, Governor Schwarzenegger approved Assembly Bill (AB) 32, the California Global Warming Solutions Act of 2006. The purpose of AB 32 is to require a sharp reduction in greenhouse gas (GHG) emissions and set the stage for a sustainable future. AB 32 requires California to reduce its GHG emissions to 1990 levels by 2020, a reduction of 15 percent below emissions expected under a "business as usual" scenario. AB 32 requires the California Air Resources Board (CARB) to develop regulations and market mechanism to meet the GHG emission reduction targets.

On September 8, 2016, Governor Brown approved SB 32. The purpose of SB 32 is to set additional GHG emission reduction targets following the California Global Warming Solutions Act of 2006. SB 32 requires CARB to ensure that GHG emissions are reduced to 40 percent below the 1990 level by 2030.



SOURCE: Fehr & Peers, 2021

Carson General Plan Update

Figure 3.15-4
Existing and Proposed Bicycle Facilities



Senate Bill 375

On September 30, 2008, Governor Schwarzenegger approved SB 375. The purpose of SB 375 is to coordinate transportation and land use planning to reduce GHG emissions. SB 375 requires Metropolitan Planning Organizations (MPOs) to adopt Sustainable Communities Strategies (SCS) as part of the Regional Transportation Plan (RTP) to achieve goals for the reduction of GHG emissions from automobiles and light trucks in the region. SB 375 also requires CARB to work with MPOs to provide each region with GHG reduction targets for 2020 and 2035 by September 30, 2010. The bill requires transportation planning and programming activities by the MPOs to be consistent with the SCS. To the extent the SCS is unable to achieve the GHG reduction targets set by CARB, MPOs are required to prepare an alternative planning strategy to the SCS showing how the targets would be achieved through alternative development patterns, infrastructure, or additional transportation measures and policies. CARB is required to review each MPOs SCS and alternative planning strategy to determine whether the strategy would achieve GHG emission reduction targets.

Senate Bill 743

On September 27, 2013, Governor Brown signed SB 743, which became effective on January 1, 2014. The purpose of SB 743 is to streamline the review under the CEQA process for several categories of development projects including the development of infill projects in transit priority areas and to balance the needs of congestion management with statewide goals related to infill development, promotion of public health through active transportation, and reduction of GHG emissions. SB 743 adds Chapter 2.7: Modernization of Transportation Analysis for Transit Oriented Infill Projects to the CEQA Statute (Section 21099). Among other things, SB 743 mandates that alternative metric(s) for determining impacts relative to transportation shall be developed to replace the use of Level of Service (LOS) in CEQA documents. Previously, environmental review of transportation impacts focused on the delay that vehicles experience at intersections and on roadway segments, which is often measured using LOS. Pursuant to SB 743, the focus of transportation analysis changes from vehicle delay to VMT. The Office of Planning and Research (OPR) released two rounds of draft proposals for updating the CEQA Guidelines related to evaluating transportation impacts and, after further study and consideration of public comment, submitted a final set of revisions to the Natural Resources Agency in November 2017. This was followed by a rulemaking process that would implement the requirements of the legislation. The updates to the CEQA Guidelines required under SB 743 were approved on December 28, 2018. Under CEQA Guidelines Section 15064.3, statewide application of the new VMT metric was required beginning on July 1, 2020.

Regional

Southern California Association of Governments

The Southern California Association of Governments (SCAG) leads the development of the RTP, which presents the vision for transportation throughout most of Southern California. SB 375 was passed to reduce GHG emissions from both automobiles and light trucks through integrated transportation, land use, housing, and environmental planning. Under SB 375, SCAG is tasked with developing the SCS for the Southern California region. The SCS, as a component of the

RTP, provides a plan for meeting emissions reduction targets set forth by the CARB. The 2020–2045 RTP/SCS identifies priorities for transportation planning within the Southern California region, sets goals and policies, and identifies performance measures for transportation improvements to ensure that future projects are consistent with other planning goals for the region. The RTP/SCS has numerous goals to increase mobility for the region’s residents and visitors, and an emphasis on sustainability and integrated planning to collectively improve the region’s mobility, economy, and sustainability. The RTP/SCS must be approved by federal agencies in order to receive federal transportation funds. Only projects and programs included in the RTP are eligible for federal funding. SCAG adopted the 2020–2045 RTP/SCS in June 2020. The Regional Transportation Improvement Plan (RTIP), also prepared by SCAG and based on the RTP, lists all of the regional funded/programmed improvements within the next seven years. In order to qualify for CEQA streamlining benefits under SB 375, a project must be consistent with the RTP/SCS.

Long Range Transportation Plan

The Long-Range Transportation Plan (LRTP), prepared by Metro, is the long-range plan that responds to emerging environmental challenges through the provision of new initiatives and recommendations that include driving alternatives, mobility improvements, enhanced public transit, expanded rail, and the development of major corridor projects in Los Angeles County.

SCAG Regional Comprehensive Plan

The Regional Comprehensive Plan (RCP) is part of an overall regional planning process that is linked directly to SCAG’s Growth Management Plan, the Housing Allocation Process, and the South Coast Air Quality Management District’s Air Quality Management Plan. The last RCP was adopted by SCAG in 2008 and includes elements on Land Use and Housing, Open Space and Habitat, Water, Energy, Air Quality, Solid Waste, Transportation, and Security and Emergency Preparedness.

Highway Performance Monitoring System

The Highway Performance Monitoring System (HPMS) is a federally mandated inventory system and planning tool designed to assess the nation’s highway system. HPMS is used as a management tool by the federal and state governments and local agencies to analyze the system’s condition and performance. The HPMS data are used for allocation of federal funds, identification of travel trends and future forecasts, Environmental Protection Agency air quality conformity tracking, and biennial reports to the United States Congress on the state of the nation’s highways. The HPMS is administered by Caltrans, with technical data provided by local agencies.

Long Beach Transit

Long Beach Transit, created in 1963, provides bus service in southern Los Angeles County, particularly in Long Beach and Signal Hill with routes extending into Artesia, Bellflower, Carson, Cerritos, Compton, Hawaiian Gardens, Lakewood, Los Alamitos, Paramount, and Seal Beach. The agency is governed by a seven-member Board of Directors appointed by the Mayor of the city of Long Beach.

Access Services

Access Services is a state-mandated local governmental agency created by Los Angeles County's public transit agencies to administer and manage the delivery of regional American with Disabilities Act (ADA) paratransit service. Access Services was established by 44 public fixed route transit operators in Los Angeles County. It is governed by a nine-member board appointed by the Los Angeles County municipal fixed route operators, the City of Los Angeles, the County of Los Angeles, the Transportation Corridor Representatives of the Los Angeles branch of the League of Cities, the Los Angeles County Commission on Disabilities, and the Coalition of Independent Living Centers.

Local

City of Carson Municipal Code

The Carson Municipal Code identifies numerous components affecting the transportation system. This includes parking requirements and design guidelines that provide detailed design information for the circulation system of new developments, including parking facilities, driveways, sidewalks, and pedestrian facilities.

3.15.4 Project Impact Analysis

Thresholds of Significance and Methodology

Thresholds of Significance

Appendix G of the State CEQA Guidelines provides screening questions that address potential impacts related to several environmental issues. The CEQA guidelines provide that lead agencies may use the questions set forth in Appendix G to assess the significance of a project's environmental effects, and the use of Appendix G as a significance threshold is routinely sanctioned by the courts (although such use is not mandatory). Based on the Appendix G questions regarding transportation, a project would have a significant impact if the project would:

- Threshold TR-1:** Conflict with a program, plan, ordinance or policy addressing the circulation system including transit, roadway, bicycle and pedestrian facilities;
- Threshold TR-2:** Conflict or be inconsistent with CEQA Guidelines Section 15064.3, Subdivision (b);
- Threshold TR-3:** Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment); or
- Threshold TR-4:** Result in inadequate emergency access.

Methodology

VMT Analysis

SB 743 requires that congestion or delay-based metrics, such as roadway capacity and LOS, no longer be used as performance measures for the determination of the transportation impacts of projects in studies conducted under CEQA. Instead, new performance measures such as VMT will be used. Prior CEQA analyses focused on measuring congestion through LOS to provide an understanding of how the transportation network was functioning and allowed for the movement of people and goods. While VMT continues to evaluate auto travel, the focus is shifted to the impact of driving on the environment by setting the goal of a reduction in per capita vehicle travel as a strategy for improving air quality.

A detailed analysis for the Project was prepared by Fehr & Peers in September 2021. The methodology for determining VMT transportation impacts in the city of Carson is contained in the City's proposed draft Transportation Study Guidelines, which are informed by the guidance developed by OPR. The Transportation Study Guidelines outline the following process for performing a VMT analysis:

1. Determine if VMT analysis is necessary by comparing project characteristics for each land use to the City's screening criteria.
2. If a project component does not meet any of the screening criteria, perform VMT analysis for the component(s) that do not meet the screening criteria to determine that component's VMT (using the appropriate metric based on land-use type).
3. Compare the project component VMT to the City's significance criteria to determine if there is VMT transportation impact.
4. If there is an impact, identify mitigation measures to reduce the project impact.

While SCAG recently adopted the 2020–2045 RTP/SCS, the travel demand forecasting model used to evaluate the plan is not yet available for use. SCAG's new RTP/SCS model is expected to be available for use on land use and transportation planning projects in late 2021. Based on the planned growth and transportation improvements envisioned in the new RTP/SCS, the VMT trends reported from the 2016–2040 RTP/SCS model are expected to be like those in the new 2020 model. As such, the 2016–2040 RTP/SCS model was used for the analysis described in this section.

The SCAG 2016–2040 RTP/SCS model is used to estimate a project's VMT. VMT can be presented in several different forms depending on the analysis being conducted. "Home-Based VMT" per capita is used for residential projects and "Home-Based Work VMT" per employee for office projects. For land use plans such as General Plans, total VMT per service population¹ is also used to determine potential impacts.

Pursuant to OPR and the City of Carson's draft Transportation Study Guidelines, the VMT analysis for the Project includes estimates of the "project generated VMT" for the Project's

¹ Total number of residents and employees within the city.

Transportation Analysis Zones (TAZs)² and estimates of the ‘project effect on VMT’ under the following conditions:

- The Existing/Baseline (2016) Conditions represent the existing baseline conditions for the project based on the date that the Notice of Preparation for the EIR was released and conditions on the ground at the time the project was started;
- The Cumulative Base (2040) Conditions (No Project) represent the buildout of the 2016-2040 SCAG Regional Transportation Plan/ Sustainable Communities Strategy (RTP/SCS), including regional land uses, transportation improvements consistent with the 2016-2040 SCAG RTP/SCS, and continuation of the current General Plan; and
- The Cumulative Plus Project (2040) Conditions (Plus Project) represent the proposed General Plan update scenario. The land use proposed by the Project is represented in the growth of the future year socioeconomic input data in the SCAG travel demand model for the City’s Planning Area.

Project-generated VMT was extracted from the SCAG Model. The summarized project-generated VMT metrics described above are compared against the City of Carson’s significance criteria for determining VMT impacts. Carson’s draft Transportation Study Guidelines indicate that “Home-Based VMT” per capita should be evaluated for residential projects and “Home-Based Work VMT” per employee should be evaluated for office projects. This section presents these two metrics along with total VMT per service population and total VMT, which are summarized in **Table 3.15-3, VMT Summary by Trip Scenario.**

**TABLE 3.15-3
 VMT SUMMARY BY TRIP SCENARIO**

SED/VMT Metrics	2016 Existing/ Baseline Conditions	Cumulative Base 2040 Conditions	Cumulative Plus Project 2040 Conditions
Population	108,569	121,153	143,501
Employment	90,580	100,042	111,629
Service Population	199,149	221,195	255,130
Total VMT (Include Auto and Trucks)	7,867,557	8,405,911	9,505,005
Home-Based VMT (Productions)	1,475,720	1,470,830	1,709,723
Home-Based Work VMT (Attractions)	1,725,203	1,548,271	1,719,621
Total VMT per Service Population	39.5	38.0	37.3
Home-Based VMT per Capita	14.3	12.7	12.4
Home-Based Work VMT per Employee	20.0	16.2	16.0

SOURCE: Prepared by Environmental Science Associates based on Appendix F1.

² TAZs are geographic polygons similar to Census block groups used to represent areas of homogenous travel behavior in the SCAG model.

Project Impact Analysis

Conflict with Adopted Circulation Program, Plan, Ordinance, or Policy

Threshold TR-1: The Project would have a significant impact if future development allowed by Carson2040 would conflict with a program, plan, ordinance or policy addressing the circulation system, including transit, roadway bicycle and pedestrian facilities.

Impact TR-1: *The Project would not conflict with a program, plan, ordinance or policy addressing the circulation system, including transit, roadway bicycle and pedestrian facilities. (Less than Significant)*

The CEQA thresholds of significance for transportation and traffic impacts have shifted in recent years. In the past, transportation analysis focused on the metric of LOS, which measured congestion at local intersections and roadway segments. The emphasis of these past studies was to assure that the street grid network functioned well and allowed for efficient movement of vehicles. The current focus is to encourage active transportation (e.g., pedestrians, bicyclists, etc.) and transit, and to limit increases in VMT (see also Impact TR-2 below). An important part of this analysis is to determine the consistency of proposed projects or programmatic actions with the Circulation Element of the proposed General Plan update.

Implementation of the proposed General Plan update would improve connections to local and regional transit service and encourage the use of alternative modes of transportation, including walking and biking through supportive land use development. The Planning Area contains existing non-vehicular transportation, such as pedestrian and bicycle facilities and transit services as detailed above in Section 3.15.2, *Environmental Setting*.

The roadway network in Carson is considerably built out, such that no roadway capacity improvements (lane additions, lane widening, medians) are proposed that would change the functional classification of the roadway network. The proposed General Plan update implements multi-modal network goals and policies to calm traffic, install and improve bike lanes, and improve public transportation services.

Implementation of the proposed General Plan update would enable the City to improve bicycling programs and infrastructure throughout the city, providing connections to the existing and proposed bicycle network. Implementation of proposed General Plan update would also improve pedestrian infrastructure by providing existing and planned pedestrian facilities and prioritizing pedestrian safety.

New trips and increased VMT may affect the operation of existing transit services or routes. Several policies and goals included in the proposed General Plan update address these impacts by balancing the multimodal transportation network to provide alternatives to the automobile, improving transit service connections, and encouraging the use of alternative modes of transportation to minimize the potential for negative effects. Based on the availability of non-vehicular transportation options for the community outlined above and the Circulation Goals and policies provided in the proposed General Plan update, the proposed plan would not conflict with

any applicable program, plan, or ordinance on the circulation system, including transit, roadway, bicycle, and pedestrian facilities and the impact would be less than significant.

Proposed General Plan Policies that Address the Impact

Circulation

Guiding Policies

- CIR-G-1 Provide a balanced transportation system of multimodal networks providing a broad range of travel options to make transportation convenient, comfortable, and safe for people of all abilities.
- CIR G-2 Promote bicycling and walking, and support and improve connections to local and regional transit service.

Implementing Policies

- CIR-P-1 Update the City’s Bicycle Plan, identifying a citywide bicycle network of off-street bike paths, on-street bike lanes and bike streets. As part of the plan, consider bicycle lockers, secure bike parking, pavement condition, and access to transit, parks, and schools throughout the city. The update of the Bicycle Plan should strategically identify projects that will improve equity, the environment, reduce trips on the roadway system, and prioritize projects that align with primary local active transportation grant funding programs including Metro, SCAG, and Caltrans.
- CIR-P-8 Develop and implement street design standards on arterial corridors that are context sensitive to adjacent land uses or districts, and to all roadway users. Require large new developments and redevelopment projects to provide interconnected street networks with small blocks.
- CIR-P-10 Direct commuter traffic to move through the city primarily on arterial streets, and on collector streets as appropriate. Consider traffic calming strategies.
- CIR-P-16 Work with Long Beach Transit to serve local neighborhoods and connect residences with shopping, employment, transit, and recreational opportunities.
- CIR-P-17 Participate in and encourage collaboration among adjacent cities to provide a more reliable public transportation system the area.
- CIR-P-18 Work with transit services to provide attractive and convenient bus stops, including shade/weather protection, seats, transit information, and trash receptacles.
- CIR-P-19 Work with regional transit services to develop an on-demand transportation system that caters to senior populations and people with disabilities.
- CIR-P-20 Evaluate and adjust transit routes to better connect disadvantaged communities with major transit hubs and key destinations such as parks, schools, and healthy food opportunities.
- CIR-P-22 Develop a transportation demand management (TDM) ordinance. A TDM ordinance would incorporate strategies appropriate for the local context and land use as different strategies are more effective at reducing employee commute trips, while others focus on reducing residential, shopping, or other

discretionary trips. Strategies will generally focus on land use, parking, transit, and active transportation.

Mitigation Measures

None required.

Conflict with CEQA Guideline Section 15064.3, Subdivision (b)

Threshold TR-2: The Project would have a significant impact if future development allowed by Carson2040 would conflict or be inconsistent with CEQA Guidelines Section 15064.3, Subdivision (b).

Impact TR-2: The Project would conflict or be inconsistent with CEQA Guidelines Section 15064.3, Subdivision (b). (Significant and Unavoidable)

In the past, CEQA analysis for traffic impacts was conducted using the metric of LOS, which measures congestion at local intersections and roadway segments. The emphasis of past studies was to ensure that land use development projects would not hinder acceptable operations of the street network and efficient movement of vehicles. However, in 2013, SB 743 was passed by the California legislature and signed into law by the governor. SB 743 requires that LOS, which measures congestion and vehicle delay, no longer be used as the performance measure for the determination of transportation impacts in studies conducted under CEQA. Instead, VMT is to be used as the metric for evaluating transportation impacts.

As noted above, the CEQA thresholds of significance for transportation impacts are intended to encourage the use of active transportation and transit, and to limit increases in VMT. Land development patterns, including the density and mix of land uses, coupled with the accessibility of alternative modes of transportation (e.g., presence of pedestrian and bicycle infrastructure, transit services), have a direct effect on the number, and length, of vehicle trips, which determine the amount of VMT generated by a project. Efforts to reduce VMT may include TDM strategies and the implementation of capital improvement projects that improve mobility and accessibility for active transportation and transit users. The following section describes the VMT analysis that was conducted.

VMT Modeling

The SCAG Model is a four step, trip-based convergence model covering the entire SCAG six-county region. The Model is structured geographically into approximately 4,100 tier 1 Transportation Analysis Zones (TAZs) and 11,267 tier 2 TAZs. Socioeconomic data, the highway network, and the transit network are the primary inputs to the SCAG Model to estimate trip generation and assign vehicle trips. The Planning Area for the proposed General Plan update is represented by 26 tier 1 TAZs and 61 tier 2 TAZs. For the Existing/Baseline scenario, the 2016 base year model was used, and for the Cumulative Base (2040 No Project) scenario, the 2040 base year model was used. Compared to the 2016 base year model, the 2040 base year model uses the same number of TAZs and corresponding geographic boundaries. However, the 2040 base year model represents SCAG's forecast of the buildout of the 2040 RTP/SCS, and reflects the

socioeconomic and transportation network inputs associated with that buildout. Additionally, the 2040 base year model reflects assumptions about the increasing cost of auto ownership, as well as the implementation of regional TDM strategies that may affect how people travel.

To model the cumulative plus project scenario (“2040 Plus Project”), the 2040 base year model described above was updated to reflect the buildout of the proposed General Plan update. As such, the socioeconomic forecasts that were developed for the proposed General Plan update were input into the SCAG 2040 base year model. However, because the proposed General Plan update would not result in any significant changes to the circulation system, the default highway and transit network input assumptions for the 2040 base year model were used in the analysis. In addition, two spot improvements were reflected in the future modeling: (1) the widening of 223rd Street to provide access improvements via an additional curb lane for one block and (2) the widening of the Sepulveda Boulevard bridge between Intermodal Way and the Alameda Street ramps.

VMT Analysis

Land use and corresponding socioeconomic data forecasts were developed for the proposed General Plan update, and the SCAG model was subsequently updated to reflect Project assumptions and run to develop VMT estimates for the buildout of proposed General Plan update. Under Existing/Baseline Conditions (2016), the Planning Area comprises a service population of 199,149 (total number of residents and employees) and generates 7,867,557 daily total VMT, including private automobiles and trucks. This results in Baseline VMT metrics of 39.5 VMT per service population, 14.3 Home-Based VMT per capita for residential land uses, and 20 Home-Based Work VMT per employee for employment-generating land uses.

Under Cumulative Base (2040 No Project) Conditions, the Planning Area is estimated to comprise a service population of 221,195 and generate 8,405,911 daily total VMT. This results in estimates of 38 VMT per service population, 12.7 Home-Based VMT per capita for residential land uses, and 16.2 Home-Based Work VMT per employee for employment-generating land uses.

Under Cumulative Plus Project (2040) Conditions, total VMT increases are compared to the ‘Without Project’ scenario to reflect additional development in the city of Carson. The Planning Area is estimated to comprise a service population of 255,130 and generate 9,505,005 total daily VMT, which results in estimates of 37.3 VMT per service population, 12.4 Home-Based VMT per capita for residential land uses, and 16.0 Home-Based Work VMT per employee for employment-generating land uses, as shown in Table 3.15-3.

VMT Impact Thresholds

The City has established the following significance threshold for VMT transportation impacts for land use plans:

- Plan exceeds 15 percent below City + SOI Baseline VMT for total VMT per service population, Residential VMT per resident, and Employee VMT per employee

Project VMT Impact Analysis

To determine if Project would result in a transportation impact, the following steps were taken:

- The proposed General Plan update was compared with the SCAG RTP/SCS for consistency.
- If consistent, that may support a finding of less than significant if the change from the existing baseline VMT to the Plus Project VMT demonstrates a 15 percent reduction in total daily VMT per service population, a 15 percent reduction in daily Home-Based VMT per capita, and a 15 percent reduction in Home-Based Work VMT per employee. Therefore, these metrics were estimated and compared.
- For informational purposes, a comparison of 2040 No Project and 2040 Plus Project is also provided to help the public and stakeholders understand how development under the proposed General Plan update would affect travel patterns relative to the currently adopted plan.

As shown below in **Table 3.15-4, Baseline VMT and Significance Thresholds**, and **Table 3.15-5, 2040 Plus Project VMT Compared to Existing Baseline VMT**, the Home-Based Work VMT per employee is estimated to be 15 percent or more below the Baseline VMT and would therefore not result in a significant impact. However, total VMT per service population and Home-Based VMT per Capita are not 15 percent or more below the Baseline VMT, indicating a significant impact for these metrics.

**TABLE 3.15-4
 BASELINE VMT AND SIGNIFICANCE THRESHOLDS**

VMT Metrics	Average VMT (2016 Baseline)	Threshold (15% reduction)
Total VMT per Service Population	39.5	33.6
Home-Based VMT per Capita	14.3	12.2
Home-Based Work VMT per Employee	20.0	17.0

SOURCE: Prepared by Environmental Science Associates based on Appendix F1.

**TABLE 3.15-5
 2040 PLUS PROJECT VMT COMPARED TO EXISTING BASELINE VMT**

VMT Metrics	Average VMT (2016 Baseline)	2040 Plus Project	Percent Difference
Total VMT per Service Population	39.5	37.3	-5.7%
Home-Based VMT per Capita	14.3	12.4	-13.3%
Home-Based Work VMT per Employee	20.0	16.0	-19.7%

SOURCE: Prepared by Environmental Science Associates based on Appendix F1.

For informational purposes, **Table 3.15-6, 2040 Plus Project VMT Compared to 2040 No Project VMT**, shows the comparison between the 2040 No Project and 2040 Plus Project scenarios and suggests that the buildout of the proposed General Plan update would result in nominal decreases in the three VMT metrics.

**TABLE 3.15-6
2040 PLUS PROJECT VMT COMPARED TO 2040 NO PROJECT VMT**

VMT Metrics	2040 Base	2040 Plus Project	Percent Difference
Total VMT per Service Population	38.0	37.3	-2.0%
Home-Based VMT per Capita	12.7	12.4	-2.6%
Home-Based Work VMT per Employee	16.2	16.0	-0.9%

This information is provided for informational purposes only.

SOURCE: Prepared by Environmental Science Associates based on Appendix F1.

As shown in Table 3.15-6, all three VMT metrics perform better than the City’s Baseline (approximately 6 percent to 20 percent better). However, the state’s guidance and the City’s VMT significance thresholds require the VMT metrics to perform at least 15 percent better than the City’s baseline average in order to result in a less than significant impact. As such, the following project features were evaluated to assess their potential benefits for reducing total VMT per service population:

- 1. Implementation of Bike Improvements:** The City of Carson is expanding its bicycle and pedestrian networks as proposed in the City’s Master Plan of Bikeways and the existing General Plan. Fehr & Peers examined these bike improvements since VMT reduction benefits are likely to accrue once the supporting infrastructure is available. As discussed in its latest handbook for analyzing GHG emission reductions,³ the California Air Pollution Control Officer’s Association (CAPCOA) found that strategies involving bikeway improvements or installations can achieve from 0.2 percent to 0.8 percent VMT reduction based on how extensive the improvements are. The City is already designing or implementing the bikeway improvements listed in the **Table 3.15-7, Bike Projects Currently under Design**, below. Using guidance provided by CAPCOA, the implementation of these improvements was estimated to result in a 0.35 percent VMT reduction. This percent reduction can be applied at the community-level to all trips as per CAPCOA guidance based on the projects in Table 3.15-7.
- 2. Bikeshare program:** After the bicycle improvement projects discussed above are implemented, a bikeshare system could be promoted. VMT reduction benefits from bikeshare available from CAPCOA are estimated to provide about 0.02 percent to 0.06 percent VMT reduction benefits for pedal and electric bikeshare programs, respectively. Since potential reductions are relatively small, no VMT reductions are being applied for this feature.

³ California Air Pollution Control Officer’s Association, 2021. Handbook for Analyzing Greenhouse Gas Emission Reductions, Assessing Climate Vulnerabilities, and Advancing Health and Equity.

**TABLE 3.15-7
BIKE PROJECTS CURRENTLY UNDER DESIGN**

Name of Project	Street	Segment	# of Miles	Components
Bike Lane Installation	Carson St	I-405 NB On/Off Ramp – Santa Fe Ave	14.6	Installation of Signs, Striping and Pavement Markings for Bike Lanes along
	Figueroa St	Lomita Blvd -- Victoria St		
	Main St	Lomita Blvd -- Alondra Blvd		
	Victoria St	Avalon Blvd -- Wilmington Ave		
Bike Lane Installation	223rd St	I-110 NB/SB On/Off Ramp -- Wilmington Ave	17.7	Installation of Signs, Striping and Pavement Markings for Bike Lanes
	Avalon Blvd	Bonds St -- Victoria St		
	Central Ave	Del Amo Blvd -- Greenleaf Blvd		
	Del Amo Blvd	Figueroa St -- Susana Rd		
	University Dr	Avalon Blvd -- Wilmington Ave		
Dominguez Channel Bike Path Phase 1	Main St	Dominguez Channel – MLK Jr. St	2.4	Installation of Bike Path, Signs, Striping and Pavement Markings for Bike Path and Lanes
	MLK Jr. St	Main St – Avalon Blvd		
	Avalon Blvd	MLK Jr. St – Dominguez Channel		
Dominguez Channel Bike Path Phase 2	Dominguez Channel	Avalon Blvd -- Carson St	0.8	Installation of Bike Path, Signs, Striping and Pavement Markings for Bike Path and Lanes
Santa Ana Ave Bike Lane Installation	Santa Fe Ave	Del Amo Blvd -- Warnock Way	1.5	Installation of Signs, Striping and Pavement Markings for Bike Lanes

3. Telecommuting Options: Potential VMT reductions could result from the encouragement of telecommuting and alternative work schedules in Carson.

In the CAPCOA handbook, these reductions are available through trip reduction programs and are typically led by employers and could be achieved through a variety of approaches, such as strategies or mandates implemented by local authorities. Flexible work policies that allow employees to work part-time or full-time from home are becoming more common due to a variety of factors such as COVID-19, access to childcare, advances in technology, and more employers offering this option.

Prior to the COVID-19 lockdown, national trends in working from home showed a mixed picture that varied depending on the survey and measures used. The annual U.S. Census Bureau American Community Survey presents patterns of full-time work at home only, which has increased at a gradual pace from 3.6 percent in 2005 to 4.3 percent in 2010, and 5.2 percent in 2017 for the nation. The same picture is present in our region of focus. Between 2013 and 2016, Los Angeles County full-time rates remained at 5.6 percent. The decennial National Household Transportation Survey (NHTS) provides more detail on both part- and full-time flexible workplace practices, including work at home, flexible start times, self-employment, and work locations. According to NHTS data, the percentage of workers

who indicated they were eligible to work from home has increased over time from 10 percent in 2001, to 13 percent in 2009, and to 18 percent in 2017. The increase is more pronounced in Los Angeles, where 16 percent of workers had the option in 2009 and around 40 percent had the option in 2017.

World Economic Forum documents numerous studies, both academic and corporate, that establish the prevalence of flexible work policies today and its popularity and value to the workforce going forward.⁴ A recent University of California, Davis study on effects of COVID-19 on mobility in the SCAG region documents that “the percentage of hybrid workers continually increased, from 14.4 percent of all respondents pre-pandemic to 29.6 percent in summer 2021, and is expected by respondents to continue increasing through summer 2022.”⁵ The study authors also hint at the future of telework by stating that “sustained high adoption rates and frequency of remote work, and the expectation among respondents that they would be able to continue to work from home (including partial telework) in the future, highlight the current (and potential future) persistence of hybrid forms of work.” This persistence in flexible work practices is also documented in a recent study in the South Bay cities region.⁶

Since telecommuting trends are more pronounced for certain jobs, Fehr & Peers examined the potential VMT reductions by examining the city’s employment mix. According to 2021 data from the U.S. Census Bureau, more than 16 percent of Carson’s population is employed in employment categories that are amenable to telecommuting, including Management, Business and Finance, Computer and Mathematical, and Architecture and Engineering.

The SCAG 2040 baseline model includes an assumed TDM factor⁷ of 17 percent for the SCAG region. To provide a more conservative analysis, Fehr & Peers adjusted this factor downward to 12 percent. Given the persistent trends in flexible work and improvements in transit alternatives, a TDM factor of 12 percent was applied. This VMT reduction can be applied at the community-level.

Based on the analysis described above, the City is estimated to mitigate its total VMT by 244,490, Home-Based VMT by 43,978, and home-based work VMT by 44,232 miles. This would result in 36.3 total VMT per service population, 12.1 Home-Based VMT per capita, and 15.6 Home-Based work VMT per employee. With implementation of the measures described above, VMT impact associated with Home-Based VMT per capita can be mitigated as 12.1 is lower than the threshold value of 12.2 Home-Based VMT per capita. The impact associated with total VMT per service population will remain, thus resulting in a conflict with CEQA Guideline Section 15064.3, Subdivision (b). This impact would be significant.

Proposed General Plan Goals and Policies that Address the Impact

Implementing Policy CIR-P-22 as discussed under Impact TR-1, in addition to the following:

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- ⁴ World Economic Forum, 2021. Hybrid working is here to stay. But what does that mean in your office? Accessed at <https://www.weforum.org/agenda/2021/05/hybrid-working-your-office-future/>. Accessed Jan 30, 2022.
 - ⁵ Circella, G. et al. Unpublished. Investigating the Temporary and Longer-term Impacts of the COVID-19 Pandemic on Mobility in the SCAG Region.
 - ⁶ Prager, Fynnwin, Mohja Rhoads, and Jose N. Martínez, 2022. The COVID-19 economic shutdown and the future of flexible workplace practices in the South Bay region of Los Angeles County. *Transport Policy* 125:241–255.
 - ⁷ The TDM factor accounts for the future implementation of transportation demand management measures—such as telecommuting—that would reduce the total number of vehicle trips across the region.

Circulation

Guiding Policies

CIR-G-3 Manage the transportation network to minimize roadway congestion, while balancing traffic Level of Service (LOS) objectives with promoting reduction in vehicle miles traveled and considerations of community character and design.

Implementing Policies

- CIR-P-2 Develop a First Last Mile Plan to improve walking and biking connections to future and existing transportation hubs.
- CIR-P-3 Establish bike hubs (centralized locations with convenient bike parking for trip destinations or transfer to other transportation modes), at key transit nodes or commercial nodes.
- CIR-P-21 Work with transit providers in the city to implement public transportation improvements and enhance first-last mile connections at highly utilized transit stops.
- CIR-P-23 Pursue the implementation of TDM strategies through application of the City's Transportation Study Guidelines and compliance with Senate Bill 743 that seeks to reduce per capita VMT for residential, retail, and office trips.
- CIR-P-24 Encourage local public agencies and employers to implement TDM policies that promote VMT reductions. The research in this area is regularly evolving and can help identify viable and defensible VMT reduction strategies.
- CIR-P-25 Evaluate the potential for strategies that can reduce VMT such as citywide bike-sharing, promote car-sharing and other electrified modes as options to reduce traffic congestion.
- CIR-P-26 Prioritize and identify disadvantaged community locations to develop sustainable mobility hubs that include car-sharing, bike-sharing and public EV charging infrastructure to minimize traffic and air quality effects.

Mitigation Measures

No feasible mitigation measures are available.

Significance After Mitigation

The proposed General Plan update does not meet the total service area VMT reduction goal of 15 percent, as established in the Circulation Element. As no feasible mitigation measures are available to reduce total VMT per service population, this impact would be significant and unavoidable.

Substantially Increase Hazards Due to Geometric Design Feature or Introduce Incompatible Uses

Threshold TR-3: The Project would have a significant impact if future development allowed by Carson2040 would substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment).

Impact TR-3: *The Project would not substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment). (Less than Significant)*

The proposed General Plan update does not specify design features for the transportation system in the Planning Area and would thus not substantially increase hazards due to a design feature. Impacts regarding the potential increase of hazards due to a geometric design feature generally relates to the design of access points to and from the Planning Area and may include safety, operational, or capacity impacts that must be assessed. Given the programmatic nature of the proposed General Plan update, these are evaluated at the program/citywide level.

The land use diagram and policies contained in the proposed General Plan update emphasize transition areas and buffers between land uses of varying intensity, which would serve to reduce potential conflicts between users of the transportation system connected with each land use, including commercial and industrial truck traffic, commute traffic, pedestrians, and cyclists. The specific design and operations of individual future development projects are unknown at this time; however, policies included in the proposed General Plan update would serve to reduce potential impacts from future development.

Access locations for development allowed under the proposed General Plan update would be designed to the City's standards and would provide adequate sight distance, sidewalks, crosswalks, and pedestrian movement controls to meet the City's requirements to protect pedestrian safety. The installation of street trees and other potential impediments to adequate driver and pedestrian visibility in the public right-of-way would require review for sight distance and be designed to City standards and best practices to avoid obstructions. Pedestrian entrances separated from vehicular driveways would provide access from the adjacent streets. The proposed General Plan update has been developed with an emphasis on multi-modal street networks, which would improve compatibility between different transportation modes and between the transportation system and adjacent land uses. Proposed policies that promote bicycle and pedestrian safety would help identify and address potential safety concerns.

As a result, the proposed General Plan update would not substantially increase hazards due to a geometric design feature or incompatible use, and this impact is considered less than significant.

Proposed General Plan Goals and Policies that Address the Impact

Guiding Policy CIR-G-1 and Implementing Policy CIR-P-8 as discussed under Impact TR-1, in addition to the following:

Circulation

Guiding Policies

CIR-G-4 Encourage the development of a multimodal freight transportation system that balances the need for effective and efficient transportation of goods with the health and wellbeing of the community.

Implementing Policies

CIR-P-5 Work with the school district and private schools to improve pedestrian and bicycle routing and safety around schools. Focus pedestrian access to the elementary schools and bicycle and pedestrian access to the middle and high schools.

CIR-P-7 Create and update a Local Road Safety Plan (LRSP) which Caltrans offers grants to develop, create, and administer Vision Zero policies to prioritize safety of all roadway users.

CIR-P-28 Focus truck traffic onto appropriate arterial corridors in the city by clearly marking truck routes and posting appropriate signage to provide for the effective transport of goods while minimizing negative impacts on local circulation and noise-sensitive land uses. While the City has identified truck routes (Fig 3-8), the designation of truck routes does not prevent trucks from using other roads or streets to make deliveries to individual addresses. Seeking community input around the issue and general observation of traffic patterns as online shopping and associated deliveries increase in the future will help in developing strategies to reduce use of non-designated corridors and limit disruption and potentially regulate truck movement.

CIR-P-29 Retain and strengthen ordinances restricting trucks from residential neighborhoods, using strategies such as time-of-day restrictions.

CIR-P-30 Develop curb management strategies to accommodate growing loading needs of on-demand food and goods delivery services.

Mitigation Measures

None required.

Result in Inadequate Emergency Access

Threshold TR-4: The Project would have a significant impact if future development allowed by Carson2040 would result in inadequate emergency access.

Impact TR-4: *The Project would not result in inadequate emergency access. (Less than Significant)*

The proposed General Plan update is presented at a programmatic level. Emergency accessibility is typically assessed at a project level. Project level review required by the City includes site access review for emergency vehicles and traffic control plans that account for emergency vehicles. As stated above, future development under the proposed General Plan update would be compliant with the City's design guidelines that incorporate safety and emergency access needs,

where applicable. The City’s development review process would assure that future development under the proposed General Plan update would be consistent with these policies and not hinder emergency access for individual sites. For these reasons, the proposed General Plan update would not result in inadequate emergency access, and this impact is considered less than significant.

Proposed General Plan Goals and Policies that Address the Impact

There are no applicable proposed General Plan policies that relate to emergency access.

Mitigation Measures

None required.

3.15.5 Cumulative Impact Analysis

By its nature, the transportation analysis presented in this section represents a cumulative analysis of transportation conditions through 2040. As a result of the amount of development anticipated by the proposed General Plan update, it was determined that the city will achieve greater than a 15 percent reduction for cumulative Home-Based VMT per Capita (-15.5 percent) and Home-Based Work VMT per Employee (-21.8 percent) by 2040. However, the City will not achieve a reduction of 15 percent or more in total VMT per service population (-8.1 percent) by 2040). Therefore, the proposed General Plan update would make an incremental but significant contribution to a cumulative regional VMT impact.

It is possible that traffic generated by future development in the region could conflict with a program, plan, ordinance, or policy addressing the circulation system, thus resulting in a potentially significant cumulative impact. However, given the consistency of the proposed General Plan update with the various local, regional, and state regulatory frameworks that are in place, the contribution of the proposed General Plan update to this cumulative impact would not be cumulatively considerable.

Additionally, it is possible that traffic generated by future development in the region could substantially increase hazards due to a geometric design feature or incompatible use, thus resulting in a potentially significant cumulative impact. The proposed General Plan update includes multiple policies to improve the multi-modal network, expand pedestrian and bicycle facilities, and enhance public transportation services. These policies would improve compatibility between different transportations modes and between the transportation system and adjacent land uses, and therefore the proposed General Plan update would not substantially increase hazards due to a geometric design feature or incompatible use. As described above, future development under the proposed General Plan update would be compliant with the City’s design guidelines that incorporate safety and emergency access needs, where applicable. For these reasons, the contribution of the proposed General Plan update to this impact would not be cumulatively considerable.

3.16 Tribal Cultural Resources

3.16.1 Introduction

This section provides an analysis of potential impacts on tribal cultural resources from future development allowed under the Project. The analysis is based on a Sacred Lands File (SLF) search conducted by the California Native American Heritage Commission (NAHC), and consultations between the City of Carson (City) and Native American tribes pursuant to Assembly Bill (AB) 52. Native American consultation documentation is provided in Appendix G of this Draft EIR. Tribal cultural resources are defined by the California Public Resources Code (PRC) Section 21074 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 of Historical Resources (California Register) or included in a local register of historical resources, or a resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant. A cultural landscape that meets these criteria is a tribal cultural resource to the extent that the landscape is geographically defined in terms of the size and scope of the landscape. Historical resources, unique archaeological resources, or non-unique archaeological resources, which are defined in Section 3.4, *Cultural Resources*, of this Draft EIR, may also be tribal cultural resources if they meet these criteria.

No comments were received for this topic in response to the Notice of Preparation (NOP) and Recirculated NOP.

3.16.2 Environmental Setting

Ethnographic Setting – The Gabrielino

The city is located within Gabrielino (Gabrieleño, *Tongva*, or *Kizh*) territory. According to Bean and Smith, the Gabrielino, with the exception of the Chumash to the north, “were the wealthiest, most populous, and most powerful ethnic nationality in aboriginal Southern California.” Named after the San Gabriel Mission, the Gabrielino occupied sections of Los Angeles, Orange, and San Bernardino counties, and the islands of San Nicolas, Santa Catalina, and San Clemente. The Gabrielino subsisted on a variety of resources in several ecological zones. Acorns, sage, and yucca were gathered throughout the inland areas whereas shellfish, fish, as well as a variety of plants and animals were exploited within the marshes and along the coast. Deer and various kinds of small mammals were hunted on an opportunistic basis. Their material culture reflected subsistence technology. Lithic tools such as arrow points and modified flakes were used to hunt and process animals. A variety of ground stone grinding implements, such as the mortar, pestle, mano, and metate, were used to process both plant and animal remains for food¹.

The settlement patterns of the Gabrielino, and other nearby groups such as the Juaneño and Luiseño, were similar and they often interacted through marriage, trade and warfare. The seasonal availability of water and floral and faunal resources dictated seasonal migration rounds with more

¹ Bean, L. J., and C. R. Smith, 1978. Gabrielino. In: Handbook of North American Indians, Vol. 8, California. Robert F. Heizer, ed., pp. 538–549. Smithsonian Institution, Washington.

permanent villages and base camps being occupied primarily during winter and spring months. In the summer months, the village populations divided into smaller units that occupied seasonal food procurement areas. The more permanent settlements tended to be near major waterways and food sources and various secular and sacred activities, such as food production and storage and tool manufacturing, were conducted at these areas ².

Sacred Lands File Search

The NAHC maintains a confidential SLF which contains sites of traditional, cultural, or religious value to the Native American community. The NAHC was contacted on August 2, 2021, to request a search of the SLF. The NAHC responded to the request in a letter dated August 30, 2021, indicating that the results were negative. However, the NAHC indicated that the absence of “specific site information in the SLF does not indicate the absence of cultural resources in any project area”³ (see Appendix G).

Native American Consultation

Assembly Bill 52 and Senate Bill 18

On March 29, 2021, the City submitted notification and request to consult letters to five (5) individuals and organizations pursuant to AB 52. On March 29, 2021, the City also submitted notification and request to consult letters to seven (7) individuals and organizations pursuant to SB 18. In particular, AB 52 letters were sent via certified mail to the following California Native American tribes and individuals:

- Sandonne Goad, Gabrielino/Tongva Nation
- Charles Alvarez, Gabrielino-Tongva Tribe
- Andrew Salas, Gabrieleño Band of Mission Indians—Kizh Nation
- Robert Dorame, Gabrielino Tongva Indians of California Tribal Council
- Anthony Morales, Gabrielino/Tongva San Gabriel Band of Mission Indians

SB 18 letters were sent via certified mail to the following California Native American tribes and individuals:

- Sandonne Goad, Gabrielino/Tongva Nation
- Charles Alvarez, Gabrielino-Tongva Tribe
- Andrew Salas, Gabrieleño Band of Mission Indians - Kizh Nation
- Robert Dorame, Gabrielino Tongva Indians of California Tribal Council
- Anthony Morales, Gabrielino/Tongva San Gabriel Band of Mission Indians

² Bean, L. J., and C. R. Smith, 1978. Gabrielino. In: Handbook of North American Indians, Vol. 8, California. Robert F. Heizer, ed., pp. 538–549. Smithsonian Institution, Washington.

³ Green, Andrew, 2021. Sacred Lands File search results from the NAHC, Re: Carson General Plan Update Project, Los Angeles County.

- Scott Cozart, Soboba Band of Luiseño Indians
- Lovina Redner, Santa Rosa Band of Cahuilla Indians

On April 5, 2021, the City received a response from Chairman Andrew Salas of the Gabrieleño Band of Mission Indians – Kizh Nation (Gabrieleño Band). Chairman Salas requested consultation for the Project pursuant to AB 52 and SB 18. The City set up a consultation call for October 7, 2021; however, the Gabrieleño reached out to the City via email prior to the meeting and indicated that since the Project is a General Plan update with no ground disturbance proposed, they do not need to consult. To date, no other responses from the Native American community have been received as part of the AB 52 nor SB 18 tribal consultation effort. The AB 52 and SB 18 Native American consultation documentation is provided in Appendix G of this Draft EIR.

3.16.3 Regulatory Framework

This section provides the relevant state regulations applicable to the Project.

State

Assembly Bill 52

AB 52 was approved by California State Governor Edmund Gerry “Jerry” Brown, Jr. on September 25, 2014. The act amended California PRC Section 5097.94, and added PRC Sections 21073, 21074, 21080.3.1, 21080.3.2, 21082.3, 21083.09, 21084.2, and 21084.3. AB 52 applies specifically to projects for which a Notice of Preparation (NOP) or a Notice of Intent to Adopt a Negative Declaration or Mitigated Negative Declaration (MND) will be filed on or after July 1, 2015. The primary intent of AB 52 was to include California Native American Tribes early in the environmental review process and to establish a new category of resources related to Native Americans that require consideration under CEQA, known as tribal cultural resources. 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. On July 30, 2016, the California Natural Resources Agency adopted the final text for tribal cultural resources update to Appendix G of the State CEQA Guidelines, which was approved by the Office of Administrative Law on September 27, 2016.

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 (PRC Section 21080.3.1(b)). Tribes interested in consultation must respond in writing within 30 days from receipt of the lead agency’s formal notification and the lead agency must begin consultation within 30 days of receiving the tribe’s request for consultation (PRC Sections 21080.3.1(d) and 21080.3.1(e)).

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 (PRC Section 21080.3.2(b)).

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 otherwise failed to engage in the consultation process, or if the lead agency has complied with Section 21080.3.1(d) and the California Native American tribe has failed to request consultation within 30 days, the lead agency may certify an EIR or adopt an MND (PRC Section 21082.3(d)(2) and (3)).

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.

Senate Bill 18

Senate Bill (SB) 18 (Statutes of 2004, Chapter 905), which went into effect January 1, 2005, requires local governments (city and county) to consult with Native American tribes before making certain planning decisions and to provide notice to tribes at certain key points in the planning process. The intent is to “provide California Native American tribes an opportunity to participate in local land use decisions at an early planning stage, for the purpose of protecting, or mitigating impacts to, cultural places.”⁴

The purpose of involving tribes at these early planning stages is to allow consideration of cultural places in the context of broad local land use policy, before individual site-specific, project-level, land use designations are made by a local government. The consultation requirements of SB 18 apply to general plan or specific plan processes proposed on or after March 1, 2005.⁵

⁴ Governor's Office of Planning and Research, 2005. Tribal Consultation Guidelines: Supplement to General Plan Guidelines.

⁵ As noted under Section 3.16.2, *Environmental Setting*, under the subheading, *Native American Consultation*, the City submitted a request for consultation pursuant to SB 18 on October 9, 2020. As a General Plan Amendment is not requested as part of the Project, no further consultation is required pursuant to SB 18.

According to the Tribal Consultation Guidelines: Supplement to General Plan Guidelines, the following are the contact and notification responsibilities of local governments:⁶

- Prior to the adoption or any amendment of a general plan or specific plan, a local government must notify the appropriate tribes (on the contact list maintained by the NAHC) of the opportunity to conduct consultations for the purpose of preserving, or mitigating impacts to, cultural places located on land within the local government's jurisdiction that is affected by the proposed plan adoption or amendment. Tribes have 90 days from the date on which they receive notification to request consultation, unless a shorter timeframe has been agreed to by the tribe (Government Code Section 65352.3).
- Prior to the adoption or substantial amendment of a general plan or specific plan, a local government must refer the proposed action to those tribes that are on the NAHC contact list and have traditional lands located within the city or county's jurisdiction. The referral must allow a 45-day comment period (Government Code Section 65352). Notice must be sent regardless of whether prior consultation has taken place. Such notice does not initiate a new consultation process.
- Local government must send a notice of a public hearing, at least 10 days prior to the hearing, to tribes who have filed a written request for such notice (Government Code Section 65092).

3.16.4 Project Impact Analysis

Thresholds of Significance and Methodology

Thresholds of Significance

Appendix G of the State CEQA Guidelines provides screening questions that address potential impacts related to a number of environmental issues. The CEQA guidelines provides that lead agencies may use the questions set forth in the Appendix G to assess the significance of a project's environmental effects, and the use of Appendix G as a significance threshold is routinely sanctioned by the courts (although such use is not mandatory). Based on the Appendix G questions regarding tribal cultural resources, a project would have a significant impact if the project would:

- Threshold TCR-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:
- i. Listed or eligible for listing in the California Register of Historical Resources, or in the local register of historical resources as defined in Public Resources Code Section 5020.1(k), or
 - ii. 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

⁶ Governor's Office of Planning and Research, 2005. Tribal Consultation Guidelines: Supplement to General Plan Guidelines.

Resource Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.

Methodology

The analysis is based on a SLF search conducted by the NAHC and consultation between the City and Native American tribes pursuant to AB 52 and SB 18. Specifically, the City submitted notification and request to consult letters to Native American individuals and organizations and conducted follow-up Native American consultation.

Project Impact Analysis

Tribal Cultural Resource Significance

Threshold TCR-1: The Project would have a significant impact if future development allowed by Carson2040 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, and that is: (i) Listed or eligible for listing in the California Register of Historical Resources, or in the local register of historical resources as defined in Public Resources Code Section 5020.1(k), or (ii) 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 TCR-1: *The Project would not cause a substantial adverse change in the significance of a tribal cultural resource. (Less than Significant)*

Future development proposals initiated under the proposed General Plan update that include ground-disturbance activities (e.g., excavation, trenching, boring, grading, drilling, demolition, clearing/grubbing, etc.) have the potential to cause a substantial adverse change to tribal cultural resources as defined by Public Resources Code Section 21074. Specifically, anticipated development in the Planning Area would occur through infill development on vacant property, and through redevelopment or revitalization of underutilized properties, which could result in damage to tribal cultural resources as a result of construction-related ground disturbance. In addition, infrastructure and other improvements requiring ground disturbance could result in damage to or destruction of tribal cultural resources buried below the ground surface. Future development that results in changes to the setting through incompatible adjacent construction or facilitates public access to culturally significant sites could result in additional impacts to tribal cultural resources.

Future development that does not require ground-disturbing activities would cause no impacts on tribal cultural resources.

The NAHC SLF search for the city yielded negative results. The City submitted notification and request to consult letters to five (5) Native American individuals and organizations on March 29,

2021, pursuant to AB 52 and to seven (7) Native American individuals and organizations on March 29, 2021, pursuant to SB 18. On April 5, 2021, the City received a letter from Chairman Salas of the Gabrieleño Band requesting consultation. The City set up a consultation call for October 7, 2021; however, the Gabrieleño Band reached out to the City via email prior to the meeting and indicated that since the Project is a General Plan update with no ground disturbance proposed, they do not need to consult. To date, no other responses from the Native American community have been received as part of the AB 52 nor SB 18 tribal consultation effort.

In summary, no tribal cultural resources were identified within or adjacent to the Planning Area. However, there are unevaluated prehistoric resources within the Planning Area that could be potential tribal cultural resources and, given the historic occupation of the area, it is possible that future development within the Planning Area may result in the identification of unrecorded tribal cultural resources. However, future projects would be required to comply with the provisions of SB 18 and AB 52 to incorporate tribal consultation into the CEQA process to ensure that tribal cultural resources are properly identified and that mitigation measures are identified to reduce impacts on these resources. Additionally, the proposed General Plan policies listed below would help address impacts to tribal cultural resources by requiring project-specific tribal consultation and the preparation of an assessment for the potential to encounter tribal cultural resources. Adherence to existing regulations and proposed General Plan policies would ensure that the Project's impact with respect to tribal cultural resources would be less than significant.

Proposed General Plan Policies that Address the Impact

Open Space and Environmental Conservation

Guiding Policies

- OSEC-G-6 Identify, protect, and preserve important archaeological, paleontological, tribal, and historic resources for their aesthetic, scientific, educational, and cultural values.
- OSEC-G-8 Recognize the Tribal Nations who first lived in the Carson area and preserve their identity, culture, and artifacts. Consistent with state law, consult with local Tribal Nations and the Native American Heritage Commission to protect tribal cultural resources including sites, features, places, cultural landscapes, sacred places, or objects with cultural value to the tribes that is on or eligible for inclusion in the California Register of Historic Resources or a local historic register.

The State of California has adopted regulations that establish guidance and clear procedures for contacting and consulting with local tribes regarding proposed land use decisions for the purpose of protecting tribal cultural resources. Senate Bill 18 (SB 18) requires local governments to notify and consult with Native American tribes regarding tribal cultural places (otherwise known as sacred sites) prior to adopting or amending a General Plan or designating land as open space. Assembly Bill 52 (AB 52) requires that Native American tribes be offered the opportunity to consult on CEQA documents and take an active role in the CEQA process.

Implementing Policies

OSEC-P-9 For development and redevelopment proposals in archaeologically-or culturally-sensitive areas of Carson, require an assessment of the potential presence of archaeological and tribal cultural resources, including a site survey and a records search of the California Historical Resources Information System at the South Central Coastal Information Center (SCCIC). As warranted by the results of the assessment, require additional studies to identify and address project-specific impacts on archaeological and tribal cultural resources.

The City should incorporate the study recommendations as project conditions of approval to ensure that impacts on archaeological and/or tribal cultural resources are mitigated to the extent possible. Studies should be prepared according to National Register Bulletin 24: Guidelines for Local Surveys: A Basis for Preservation Planning and the Secretary of the Interior's Standards and Guidelines for Archaeology and Historic Preservation.

OSEC-P-11 Proactively coordinate with the area's native tribes in the review and protection of any tribal cultural resources discovered at development sites.

Mitigation Measures

None required.

3.16.5 Cumulative Impact Analysis

Future development in the Los Angeles Basin, including growth anticipated under the proposed General Plan update, could result in a substantial adverse change in the significance of tribal cultural resources, thus resulting in a potentially significant cumulative impact. All future development would be required to comply with SB 18 and AB 52 consultation, which would ensure that tribal cultural resources are properly identified and that mitigation measures are identified to reduce impacts on these resources. For this reason, the Project's contribution to this potentially significant cumulative impact would not be cumulatively considerable.

3.17 Utilities and Service Systems

3.17.1 Introduction

This section provides an analysis of potential environmental impacts from future development allowed under the Project related to public utilities, including water, wastewater, stormwater systems, and solid waste services. This section also evaluates the existing water, wastewater, stormwater, and solid waste infrastructure and services in the Planning Area, as well as relevant federal, state, and local regulations and programs.

No comments were received in response to the Notice of Preparation (NOP) and Recirculated NOP regarding utilities and service systems.

3.17.2 Environmental Setting

Water System

Water service in the City of Carson's Planning Area is provided by the California Water Service Company's Dominguez District (Cal Water) and the Golden State Water Company (GSW) Southwest Service Area.

Cal Water serves most of Carson through a combination of local groundwater and surface water purchased from Metropolitan Water District (MWD), as well as recycled water obtained from the West Basin Municipal Water District (WBMWD). The Dominguez District covers approximately 35 square miles in Los Angeles County and includes 374 miles of pipeline, nine active wells, 12 storage tanks and seven MWD connections. In 2020, the Rancho Dominguez District supplied 4,271 acre-feet (AF) of groundwater, 438 AF of desalinated water, 23,673 AF of imported water, and 4,587 AF of recycled water to 32,997 municipal connections.¹

GSW serves portions of Carson, primarily the northwest corner of the Planning Area, through a combination of local groundwater and imported water purchased from MWD, as well as recycled water from WBMWD.² The Southwest Service Area covers approximately 25.2 square miles in Los Angeles County and owns and operates 13 active wells with a combined capacity of 13,400 gallons per minute. In 2020, GSW's Southwest Service Area supplied 7,172 AF of groundwater, 19,055 AF of imported water, and 409 AF of recycled water to 51,764 municipal connections.³

Water Supply

Imported Water

MWD imports surface water from the Colorado River and State Water Project in Northern California via the Colorado River and the California Aqueduct, respectively. The Dominguez District purchases imported water from MWD through two member agencies, the WBMWD and the city of Torrance,⁴ while GSW purchases imported water from MWD through the WBMWD,

¹ California Water Service, 2021. 2020 Urban Water Management Plan (Dominguez District). June 2021.

² Golden State Water Company, 2021. 2020 Urban Water Management Plan Southwest Service Area. July 2021.

³ Golden State Water Company, 2021. 2020 Urban Water Management Plan Southwest Service Area. July 2021.

⁴ California Water Service, 2021. 2020 Urban Water Management Plan (Dominguez District). June 2021.

and another member agency, the Central Basin Municipal Water District (CBMWD). MWD treats the surface water provided to WBMWD and CBMWD at the F.E. Weymouth treatment plant located in La Verne, CA. The Weymouth facility has a capacity of 520 million gallons per day (MGD) and is currently treating an average of 224 MGD.

Groundwater

Both Cal Water’s Dominguez District and GSW’s Southwest Service Area obtain groundwater from the West Coast and Central basins of the Los Angeles Coastal Plain. Most of the city of Carson is located within the West Coast Basin, with a small portion of the city (northeastern corner of the Planning Area) located in the Central Basin. A detailed description of these basins is provided in Section 3.9, *Hydrology and Water Quality*, of this Draft EIR.

Both the West Coast Basin and the Central Basin are adjudicated, which limits the amount of water that can be extracted each year by a court decision. As a result, the Dominguez District is limited to an allowable pumping allocation (APA) of 10,417 AF per year of adjudicated rights in the West Coast Basin and an APA of 640 AF year of adjudicated rights in the Central Basin,⁵ while the Southwest Service Area is limited to an APA of 7,502 AF per year of adjudicated rights in the West Coast Basin and an APA of 16,439 AF year of adjudicated rights in the Central Basin.⁶

Recycled Water

WBMWD is the recycled water distributor to Cal Water’s Dominguez District and the GSW’s Southwest Service Area. WBMWD acquires, controls, distributes, and sells recycled water to several cities, agencies, and customers in the greater Los Angeles area. The WBMWD receives secondary effluent from the City of Los Angeles’ Hyperion Wastewater Treatment Plant (WWTP), which is further treated at the Edward C. Little Water Recycling Facility (ELWRF) before delivery to Dominguez District and Southwest Service Area customers. Over the past five years, the WBMWD has received an average of approximately 39,600 AF of water per year from the Hyperion WWTP for further treatment at ELWRF, which has a current annual capacity of 62,700 AF.⁷ In 2020, the Dominguez District and Southwest Service Area utilized 4,587 AF⁸ and 409 AF⁹ of recycled water, respectively.

Desalinated Water

Cal Water’s Dominguez District is producing desalinated water through the Dominguez Desalination Demonstration Project, also known as the C. Marvin Brewer Desalter. Potable water is produced from brackish groundwater from the nearby Silverado aquifer. In 2020, the C. Marvin Brewer Desalter produced 438 AF of potable water.¹⁰ GSW does not produce desalinated water and does not incorporate any projected desalinated water supplies into its water supply portfolio.

⁵ California Water Service, 2021. 2020 Urban Water Management Plan (Dominguez District). June 2021.

⁶ Golden State Water Company, 2021. 2020 Urban Water Management Plan Southwest Service Area. July 2021.

⁷ West Basin Municipal Water District, 2021. 2020 Urban Water Management Plan. June 2021

⁸ California Water Service, 2021. 2020 Urban Water Management Plan (Dominguez District). June 2021.

⁹ Golden State Water Company, 2021. 2020 Urban Water Management Plan Southwest Service Area. July 2021.

¹⁰ California Water Service, 2021. 2020 Urban Water Management Plan (Dominguez District). June 2021.

Water Demand

Cal Water’s projected demands for potable and non-potable use within the Dominguez District are shown in **Table 3.17-1, California Water Service Dominguez District Total Retail Water Demand**.¹¹ In general, Cal Water has forecasted a modest increase in demand proportional with population growth, though a small amount of water conservation reduction has also been accounted for to reflect improved plumbing and design standards.

**TABLE 3.17-1
 CALIFORNIA WATER SERVICE DOMINGUEZ DISTRICT TOTAL RETAIL WATER DEMAND**

Use Type	Projected Water Use (AF)				
	2025	2030	2035	2040	2045
Single Family	8,298	8,281	8,353	8,414	8,551
Multi-Family	2,477	2,468	2,482	2,502	2,533
Commercial	5,548	5,417	5,356	5,311	5,275
Industrial	9,350	9,350	9,350	9,350	9,350
Institutional/Government	1,064	1,045	1,037	1,030	1,024
Other Potable	21	21	21	21	21
Landscape	0	0	0	0	0
Losses	1,613	1,528	1,550	1,573	1,595
Total	28,371	28,110	28,149	28,200	28,349

NOTES: AF = acre-feet

Volume of potable demands are net of indirect potable reuse for groundwater recharge.

SOURCE: California Water Service, 2021. 2020 Urban Water Management Plan (Dominguez District). June 2021.

As a wholesale water supplier, Cal Water is not required to establish and meet baselines and targets for daily per capita water use. However, they can support retail water suppliers by adopting policies and programs that encourage demand reduction in their areas. The Dominguez District has coordinated its demand reduction policies and programs with both the WBMWD and CBMWD.

GSW’s projected demands for potable and non-potable use within the Southwest Service Area are shown in **Table 3.17-2, Golden State Water Company Southwest Service Area Total Retail Water Demand**. Water demand is expected to increase due to population and employment growth within the Southwest Service Area.

¹¹ California Water Service, 2021. 2020 Urban Water Management Plan (Dominguez District). June 2021.

**TABLE 3.17-2
 GOLDEN STATE WATER COMPANY SOUTHWEST SERVICE AREA TOTAL RETAIL WATER DEMAND**

Use Type	Projected Water Use (AF)				
	2025	2030	2035	2040	2045
Single Family	9,427	9,570	9,715	9,862	10,011
Multi-Family	8,738	8,870	9,005	9,141	9,279
Commercial/Institutional	6,763	6,866	6,970	7,075	7,182
Industrial	404	410	416	422	429
Landscape	422	428	435	442	448
Other	0	0	0	0	0
Water Loss	1,185	1,203	1,221	1,239	1,258
Total	26,939	27,347	27,761	28,181	28,608

NOTE: AF = acre-feet

SOURCE: Golden State Water Company, 2021. 2020 Urban Water Management Plan Southwest Service Area. July 2021.

Water Infrastructure

Water infrastructure in the city consists of a combined domestic and fire water supply system that is an integrated network of pipelines located in city streets. The larger mains range in size from 12 to 42 inches in diameter. Several residential areas have mains less than 6 inches in diameter. However, these mains provide sufficient flow for both normal use and Fire Department fire flow requirements.

Wastewater Collection, Treatment, and Disposal

In 2006, the State Water Resources Control Board (SWRCB) adopted Statewide General Waste Discharge Requirements (WDRs) and a Monitoring and Reporting Program for sanitary sewer systems in response to growing public concern about the water quality impacts of sanitary sewer overflows (SSOs), particularly those that cause beach closures, adversely affect other bodies of water, or pose serious health and safety or nuisance problems. In compliance with the requirements of the WDRs, the City of Carson (City) prepared its Sewer System Management Plan (SSMP), which was last updated in 2015.

The City’s Public Works Department manages the sanitary sewer collection system, which consists of 181.73 miles of gravity sewer lines and three pump stations operated and maintained by the County of Los Angeles Consolidated Sewer Management District (CSMD). The city’s local sewers discharge into larger facilities owned and maintained by the Los Angeles County Sanitation Districts (LACSD) for conveyance, treatment, and disposal.

According to the 2018 SSMP Audit, Carson has not experienced SSOs since the last audit was performed in 2015. During this period, approximately 9,000 feet of defective sewer pipes were identified and rehabilitated using pipe lining material, and several pump station repair/upgrade projects were completed. There were no sewer-capacity issues identified in the city’s system

during this audit period, and CSMD and the city have maintained a Very Good to Excellent rating in the overall effectiveness rating of the certified SSMP. Recertification of the SSMP was due in 2020 but has not yet occurred to date. However, a comprehensive, citywide sewer and storm drain line evaluation has been proposed as a project component of the City Utilities Master Plan, identified in the City's 5-Year Capital Improvement Program (CIP) for the fiscal years 2021–2026, to determine capacity for future development.¹²

Wastewater is treated at the Joint Water Pollution Control Plant, which is located in Carson and operated by LACSD. The plant treats an average of 260 MGD of wastewater, with a design capacity of 400 MGD, and serves over 4.8 million residents, businesses, and industries. The treatment process allows the plant to be energy self-sufficient with all solids from the plant processed and anaerobically digested to produce methane gas, which is burned in the Total Energy Facility to produce enough electrical power to run the entire plant. After treatment, the effluent (wastewater) is chlorinated and discharged through two ocean outfalls a mile and a half offshore.¹³

Stormwater

The Los Angeles County Department of Public Works (LACPWD) is the agency responsible for flood control protection within Los Angeles County. Drainage in the city of Carson includes storm drains that lead to the various flood control channels, including the Dominguez Channel, Torrance Lateral, Wilmington Drain, McKinley Avenue Drain, Del Amo Channel, and Compton Creek,¹⁴ which are used exclusively for flood control and storm runoff.

Solid Waste Disposal

Residential and commercial solid waste collection in Carson is provided by Waste Resources. Waste Resources collects trash, recycling, and yard waste on a weekly basis, as well as bulky items, used motor oil and filters, manure, and sharp items upon request. Planning Area residents are encouraged to drop off hazardous household waste at a collection center operated by the City of Los Angeles in San Pedro. The City of Carson also offers senior citizens meeting certain criteria discounts for trash collection services. Commercial recycling is provided by EDCO Disposal and Waste Management Services on a weekly basis.

In 2020, about 38 percent of the solid waste generated in Carson went to the H.M. Holloway Inc. Landfill in Lost Hills, about 29 percent of Carson's solid waste went to the El Sobrante Landfill in Corona, 21 percent went to Chiquita Canyon Sanitary Landfill in Castaic, and the remaining

¹² City of Carson Public Works Department, 2022. Overview and Capital Improvement Projects: Effective Dates: July 1, 2021 – June 30, 2022, <https://ci.carson.ca.us/content/files/pdfs/publicworks/Public%20Works%205%20Year%20CIP%20Summary%20FY%2021-26.pdf>, accessed April 20, 2022.

¹³ Los Angeles County Sanitation Districts, 2021. Wastewater Treatment Process at the JWPCP. Online. <https://www.lacsd.org/services/wastewater/wwfacilities/wwtreatmentplant/jwpcp/wwtreatmentprocessjwpcp.asp>. Accessed June 2021.

¹⁴ County of Los Angeles Department of Public Works, 2017. Los Angeles County Storm Drain System. Online. <http://dpw.lacounty.gov/fcd/stormdrain/index.cfm>. Accessed December 2017.

12 percent went to 17 other landfills throughout the Los Angeles area.¹⁵ According to California Department of Resources Recycling and Recovery (CalRecycle), the H.M. Holloway Inc. Landfill has a remaining capacity of about seven million tons and is expected to remain in operation until 2030,¹⁶ the El Sobrante Landfill has a remaining capacity of about 144 million tons and is expected to remain in operation until 2051,¹⁷ and the Chiquita Canyon Sanitary Landfill has a remaining capacity of 60 million tons and is expected remain in operation until 2047.¹⁸ In 2019, the most recent year data was available, Carson disposed about 14.1 pounds per resident per day (PPD) of waste to landfills. Although the annual per capital disposal rate has been increasing since 2014, both the per resident and per employee disposal rates are less than their respective targets calculated by CalRecycle (19.3 and 37.3, respectively, as of June 2021).¹⁹

Electricity

Carson is part of the 50,000-square-mile Southern California Edison (SCE) Service Area for electric utilities. The SCE grid is powered by a mix of different energy sources, the largest proportion of which comes from eligible renewable resources including solar, wind, geothermal, eligible hydroelectric, and biomass/biowaste. The second largest contributing category is unspecified sources of power which includes electricity that has been purchased through open market transactions and is not traceable to a specific generation source. Natural gas, nuclear, and large hydroelectric are other significant energy resources.²⁰

The total electric usage in 2020 for the five zip codes in Carson—90220, 90248, 90745, 90746, and 90810—was about 1.3 billion kilowatt-hours (kWh), of which commercial and industrial customers were the largest users (43 and 35 percent, respectively). Industrial customers had the highest monthly average of electric usage (about 821,950 kWh) than any other category, and commercial customers had an average of about 6,140 kWh. Residential customers account for about 20 percent of the city’s energy usage and have an average of about 480 kWh per month.²¹

There are three major substations within the city’s boundaries: 1) Carson Substation at Alameda Street and Johns Manville Street, 2) Nola Substation at South Broadway and Victoria Street, and 3) Neptune Station at 213th Street and Grace Avenue. There are approximately one dozen transmission facilities (66 kV) that extend along Wilmington Avenue and Alameda Street that

¹⁵ California Department of Resources Recycling and Recovery (CalRecycle), 2021a. Jurisdiction Disposal By Facility. Online. <https://www2.calrecycle.ca.gov/LGCentral/DisposalReporting/Destination/DisposalByFacility>. Accessed June 2021.

¹⁶ CalRecycle, 2021b. SWIS Facility/Site Activity Details: H.M. Holloway Inc. (15-AA-0308). Available at <https://www2.calrecycle.ca.gov/SolidWaste/SiteActivity/Details/3947?siteID=758>, accessed May 2021.

¹⁷ CalRecycle, 2021c. SWIS Facility/Site Activity Details: El Sobrante Landfill (33-AA-0217). Available at <https://www2.calrecycle.ca.gov/SolidWaste/SiteActivity/Details/2280?siteID=2402>, accessed May 2021.

¹⁸ CalRecycle, 2021d. SWIS Facility/Site Activity Details: Chiquita Canyon Sanitary Landfill (19-AA-0052). Available at <https://www2.calrecycle.ca.gov/SolidWaste/SiteActivity/Details/3574?siteID=1037>, accessed May 2021.

¹⁹ CalRecycle, 2021e. Jurisdiction Diversion/Disposal Rate Summary, 2007-Current. Available at <https://www2.calrecycle.ca.gov/LGCentral/DiversionProgram/JurisdictionDiversionPost2006>. Accessed June 2021.

²⁰ Southern California Edison, 2020b. 2019 Power Content Label. Online. https://www.sce.com/sites/default/files/inline-files/SCE_2019PowerContentLabel.pdf. Accessed June 2021.

²¹ Southern California Edison, 2020b. Quarterly Customer Data Reports, Electric Usage by Zip Code, 2020. <https://www.sce.com/regulatory/energy-data---reports-and-compliances>. Accessed June 2021.

feed the SCE service area or distribute directly to select high voltage customers. There are also numerous high voltage easements, ranging from 120 kV to 500 kV, which traverse the city of Carson.

Although wildfire hazard safety concerns and extreme heat days have led to power outages or service reductions in past years, SCE is dedicated to maintaining a high level of reliability through demand-response programs and energy efficiency programs. These conservation strategies, in combination with SCE's continued advances in technology and renewable sources ensure safe, quality services in the SCE service area.

Natural Gas

Natural Gas service in Carson is provided by the Southern California Gas Company (SoCalGas). SoCalGas is the principal distributor of natural gas in Southern California and serves residential, commercial, and industrial markets. Gas supply comes from several sedimentary basins in the western U.S. and Canada which are stored in four natural gas storage facilities throughout Southern California that are owned and operated by SoCalGas.

In 2019, residential demand for gas totaled 237.5 billion cubic feet (Bcf) in the SoCalGas service area, servicing 5.61 million active meters. On average, single-family customers used about 468 therms per meter, and multi-family customers used 292 therms. Commercial market demand totaled 101.1 Bcf, of which restaurant businesses are the largest category (24.5 percent), followed by health services (12.4 percent). Industrial demand was 164.0 Bcf. Based on the 2020 California Gas Report, SoCalGas projects total gas demand to decline one percent annually from 2020-2035 due to modest economic growth, state energy efficiency standards and programs, renewable electricity goals, decline in core commercial and industrial demand, and other regulatory factors. Overall, all markets are projected to decline in demand, despite modest growth in meters.²²

Telecommunications

Cable operators serving Los Angeles County include Spectrum, AT&T U-verse, and Verizon. Federal laws provide oversight of the cable industry.

While the County continues to serve as the local franchise authority and will respond to every community inquiry that it receives, it is important for residents to understand the extent of the County's authority. Under current federal law, the County does not have any legal ability to dictate what cable companies charge for their services or how they set its channel lineup. As currently written, federal law allows all cable providers to operate in a deregulated manner when it comes to issues concerning pricing or channel lineup.

²² Southern California Gas Company, 2020. 2020 California Gas Report. https://www.socalgas.com/sites/default/files/2020-10/2020_California_Gas_Report_Joint_Utility_Biennial_Comprehensive_Filing.pdf. Accessed June 2021.

3.17.3 Regulatory Framework

This section provides the relevant federal, state, regional, and local regulations applicable to the Project.

Federal

Federal Safe Drinking Water Act

The Safe Drinking Water Act (SDWA), administered by the U.S. Environmental Protection Agency (USEPA) in coordination with the states, is the main federal law that ensures the quality of drinking water. Under the SDWA, the USEPA sets standards for drinking water quality and oversees the states localities, and water suppliers who implement those standards. The California Department of Public Health administers the regulations contained in the SDWA in the State of California.

U.S. Environmental Protection Agency

The 1986 amendments to the SDWA and the 1987 amendments to the Clean Water Act (CWA) established the USEPA as the primary authority for water programs. The USEPA is the federal agency responsible for providing clean and safe surface water, groundwater, and drinking water, and protecting and restoring aquatic ecosystems. The city of Carson is located within EPA Region 9 (Pacific Southwest), which includes Arizona, California, Hawaii, Nevada, Pacific Islands and Tribal Nations.

Federal Water Pollution Control Act of 1972 (Clean Water Act)

The CWA establishes the basic structure for regulating discharges of pollutants into the “waters of the United States.” The Act specifies a variety of regulatory and non-regulatory tools to sharply reduce direct pollutant discharges into waterways, finance municipal wastewater treatment facilities, and manage polluted runoff.

Section 303(d) of the CWA requires states, territories, and authorized tribes to develop a list of water quality limited segments of rivers and other water bodies under their jurisdiction. These waters on the list do not meet water quality standards, even after point sources of pollution have installed the minimum required levels of pollution control technology. The law requires that these jurisdictions establish priority rankings for waters on the list and develop action plans, called Total Maximum Daily Loads (TMDL), to improve water quality. These are action plans designed to improve the quality of water resources. As part of the TDML process, municipalities must examine the water quality problems and identify sources of pollutants in order to create specific actions designed to improve water quality.

Section 402 of the CWA regulates point-source discharges to surface waters through the National Pollutant Discharge Elimination System (NPDES) program. In California, the State Water Resources Control Board (SWRCB) oversees the program which is administered by Regional Water Quality Control Boards (RWQCBs). The NPDES program provides for both general permits (those that cover a number of similar or related activities) and individual permits. The NPDES program covers municipalities, industrial activities, and construction activities. The

NPDES program includes an industrial stormwater permitting component that covers ten categories of industrial activity that require authorization under a NPDES industrial stormwater permit for stormwater discharges. Construction activities, also administered by the SWRCB, are discussed below. Section 402(p) of the CWA, as amended by the Water Quality Act of 1987, requires NPDES permits for stormwater discharges from municipal separate storm sewer systems (MS4s), stormwater discharges associated with industrial activity, and designated stormwater discharges, which are considered significant contributors of pollutants to waters of the United States. On November 16, 1990, the USEPA published regulations (40 CFR Part 122), which prescribe permit application requirements for MS4s pursuant to CWA 402(p). On May 17, 1996, the USEPA published an Interpretive Policy Memorandum on Reapplication Requirements for MS4s, which provided guidance on permit application requirements for regulated MS4s. MS4 permits include requirements for post-construction control of stormwater runoff in what is known as Provision C.3. The goal of Provision C.3 is for the Permittees to use their planning authorities to include appropriate source control, site design, and stormwater treatment measures in new development and redevelopment projects to address both soluble and insoluble storm water runoff pollutant discharges and prevent increases in runoff flows from new development and redevelopment projects. This goal is to be accomplished primarily through the implementation of low impact development (LID) techniques.

Section 404 establishes a permit program, administered by United States Army Corps of Engineers (USACE), to regulate the discharge of dredge or fill materials into waters of the U.S., including wetlands. Activities in waters of the U.S. that are regulated under this program include fills for development, water resource projects (such as dams and levees), infrastructure development (such as highways and airports), and conversion of wetlands to uplands for farming and forestry. CWA Section 404 permits are issued by USACE.

National Pollutant Discharge Elimination System

The Clean Water Act was amended in 1987 to include urban and stormwater runoff, which required many cities to obtain an NPDES permit for stormwater conveyance system discharges. Section 402(p) of the Clean Water Act prohibits discharges of pollutants contained in storm water runoff, except in compliance with a NPDES permit.

State

California Department of Public Health

The Drinking Water Program, which regulates public water supply systems, is a major component of the California Department of Public Health Division of Drinking Water and Environmental Management. Regulatory responsibilities include the enforcement of the federal and State Safe Drinking Water Acts, the regulatory oversight of public water systems, issuance of water treatment permits, and certification of drinking water treatment and distribution operators. State regulations for potable water are contained primarily within the Food and Agricultural Code, the Government Code, the Health and Safety Code, the Public Resources Code, and the Water Code. Regulations are from Title 17 and Title 22 of the California Code of Regulations.

The regulations governing recycled water are found in a combination of sources including the Health and Safety Code, Water Code, and Titles 22 and 17 of the California Code of Regulations. Issues related to treatment and distribution of recycled water are generally under the influence of the RWQCB, while issues related to use and quality of recycled water are the responsibility of the California Department of Public Health.

California State Water Resources Control Board

The SWRCB and nine RWQCBs address water quality and rights regulation. Created by the California Legislature in 1967, the five-member SWRCB protects water quality by setting statewide policy, coordinating and supporting the RWQCB efforts, and reviewing petitions that contest RWQCB actions. The SWRCB is also solely responsible for allocating surface water rights. Each RWQCB makes critical water quality decisions for its region, including setting standards, issuing waste discharge requirements, determining compliance with those requirements, and taking appropriate enforcement actions.

California Department of Water Resources

The California Department of Water Resources (DWR) is responsible for the operation and maintenance of the California State Water Project. DWR is also responsible for overseeing the statewide process of developing and updating the California Water Plan (Bulletin 160 series); protecting and restoring the Sacramento-San Joaquin Delta; regulating dams, providing flood protection, and assisting in emergency management; educating the public about the importance of water and its proper use; and providing technical assistance to service local water needs.

California Porter-Cologne Water Quality Control Act

The Porter-Cologne Water Quality Control Act established the SWRCB and divided the state into nine regional basins, each with a RWQCB. The SWRCB is the primary state agency responsible for protecting the quality of the state's surface and groundwater supplies, while the regional boards are responsible for developing and enforcing water quality objectives and implementation plans. The Planning Area is located within the jurisdiction of Santa Ana RWQCB.

The Act authorizes the SWRCB to enact state policies regarding water quality in accordance with CWA Section 303. In addition, the act authorizes the SWRCB to issue WDRs for projects that would discharge into state waters. The Porter-Cologne Water Quality Control Act requires that the SWRCB or the Santa Ana RWQCB adopt water quality control plans (basin plans) for the protection of water quality. A basin plan must:

- Identify beneficial uses of waters to be protected;
- Establish water quality objectives for the reasonable protection of the beneficial uses; and
- Establish a program of implementation of achieving the water quality objectives.

Basin plans also provide the technical basis for determining waste discharge requirements, taking enforcement actions, and evaluating clean water grant proposals. Basin plans are updated and reviewed every three years in accordance with Article 3 of the Porter-Cologne Water Quality

Control Act and Section 303(c) of the CWA. The local basin plans are described under Local Regulations, below.

The Water Conservation Act of 2009 (SB X7-7)

California legislation enacted in 2009, as SB 7 of the 7th Special Legislative Session (SB X7-7) instituted a new set of urban water conservation requirements known as “20 Percent by 2020”. These requirements stipulate that urban water agencies reduce per-capita water use within their service areas by 20 percent relative to their use over the previous 10–15 years.

The City, via WBMWD and CBMWD, plans to comply with the SB X7-7 requirements through a combination of on-going water conservation measures and additional recycled water development. The 2020 UWMP for WBMWD determined that as of 2020, investments made in water conservation have helped its retailers to meet their individual SB X7-7 targets. The 2020 UWMP for CBMWD shows that SB X7-7 targets have been met as of 2020.

State Updated Model Landscape Ordinance (AB 1881)

The state’s updated Model Landscape Ordinance requires cities and counties to adopt landscape water conservation ordinances by January 31, 2010. In 2015, Executive Order B-29-15 tasked the California Department of Water Resources (DWR) with revising the 2010 Model Water Efficient Landscaping Ordinance to increase water efficiency standards for new and retrofitted landscapes. Increased water efficiency can be achieved through efficient irrigation systems, graywater usage, and onsite storm water capture, and by limiting the portion of landscapes that can be covered in turf. Projects in the city that are subject to the Model Water Efficient Landscaping Ordinance requirements must submit a Landscape Documentation Package as part of the plan check submittal process with the City.²³

California Urban Water Management Planning Act

The California Legislature enacted the Urban Water Management Planning Act of 1983 (California Water Code Sections 10610 through 10656), which is intended to support conservation and efficient use of urban water supplies at the local level. The act required that every urban water supplier that provides water to 3,000 or more customers, or over 3,000 AF of water annually, to make every effort to ensure the appropriate level of reliability in its water service to meet the needs of its customers during normal, dry, and multiple dry years. The act requires that total projected water use be compared to water supply sources over the next 20 years in five-year increments, that planning occur for single- and multiple-dry water years, and that plans include a water recycling analysis that incorporates a description of the wastewater collection and treatment system within the agency’s service area along with current and potential recycled water uses.

Applicable urban water suppliers within California are required by the Water Code to prepare and adopt an Urban Water Management Plan (UWMP) and update it every five years. A UWMP is required in order for a water supplier to be eligible for DWR-administered state grants, loans, and

²³ City of Carson, 2021. CARSONSCAPE: Model Water Efficient Landscape Ordinance. Available at: <https://ci.carson.ca.us/communitydevelopment/MWELO.aspx>, Accessed October 2021.

drought assistance. A UWMP provides information on water use, water resources, recycled water, water quality, reliability planning, demand management measures, best management practices (BMPs), and water shortage contingency planning for a specified service area or territory. The UWMPs for Cal Water and GSW were adopted in June 2021 and July 2021, respectively.

California Emergency Graywater Regulations

In 2009, as part of the Governor's declared State of Emergency, Chapter 16A "Non-potable Water Reuse Systems" was incorporated into the 2007 California Plumbing Code. Chapter 16A establishes minimum requirements for the installation of graywater systems in residential occupancies regulated by the California Department of Housing and Community Development, providing guidance and flexibility designed to encourage the use of graywater. The standards allow small graywater systems to be installed in homes without a construction permit, substantially reducing the barriers to installing small residential graywater systems in California. The purpose of the regulations is to conserve water by facilitating greater reuse of laundry, shower, sink, and similar sources of discharge for irrigation and/or indoor use; to reduce the number of noncompliant graywater systems by making legal compliance easily achievable; to provide guidance for avoiding potentially unhealthful conditions; and to provide an alternative way to relieve stress on private sewage disposal systems.

State Water Resources Control Board

On May 2, 2006, the SWRCB adopted a General Waste Discharge Requirement (WDR) (Order No. 2006-0003) for all publicly-owned sanitary sewer collection systems in California with more than one mile of sewer pipe. The order provides a consistent statewide approach to reducing SSOs by requiring public sewer system operators to take all feasible steps to control the volume of waste discharged into the system, to prevent sanitary sewer waste from entering the storm sewer system, and to develop a sewer system management plan. The City's SSMP was approved by City Council in 2015 and includes an overflow emergency response plan; operation and maintenance program; fats, oils, and grease plan; design and performance standards; system capacity plan; and communications program.²⁴

California's Department of Resources Recycling and Recovery

CalRecycle is the state's leading authority on recycling, waste reduction, and product reuse. CalRecycle plays an important role in the stewardship of California's vast resources and promotes innovation in technology to encourage economic and environmental sustainability. CalRecycle brings together the state's recycling and waste management programs and continues a tradition of environmental stewardship. Mandated responsibilities of CalRecycle are to reduce waste, promote the management of all materials to their highest and best use, and protect public health and safety and the environment.

California Integrated Waste Management Act (AB 939)

AB 939, California's Integrated Waste Management Act of 1989, mandated that 50 percent of solid waste be diverted by the year 2000 through source reduction, recycling, and composting.

²⁴ City of Carson. 2015. Sewer System Management Plan (SSMP). Adopted 2015.

AB 939 also established a goal for all California counties to provide at least 15 years of ongoing landfill capacity. This requires each region to prepare a source reduction and recycling element to be submitted to CalRecycle, which administers programs formerly managed by the state's Integrated Waste Management Board and Division of Recycling.

California Solid Waste Reuse and Recycling Access Act of 1991 (AB 1327)

AB 1327 was established in 1991, which required CalRecycle to develop a model ordinance for the adoption of recyclable materials in development projects. Local agencies were then required to adopt the model, or an ordinance of their own, governing adequate areas for collection and loading of recyclable materials in development projects. Article V, Sanitation and Health, Chapter 2, Collection of Solid Waste and Recyclable Materials, of the Carson Municipal Code, addresses the collection of recyclable materials.

Disposal Measurement System Act of 2008 (SB 1016)

SB 1016 maintains the 50 percent diversion rate requirement established by AB 939, while establishing revised calculations for those entities who did not meet the 50 percent diversion rate. SB 1016 also established a per capita disposal measurement system to make the process of goal measurement, as established by AB 939, simpler, timelier, and more accurate. The new disposal based indicator—the per capita disposal rate—uses only two factors: a jurisdiction's population (or in some cases employment) and its disposal as reported by disposal facilities.

Solid Waste Diversion (AB 341)

Effective July 1, 2012, AB 341 requires that commercial enterprises that generate four cubic yards or more of solid waste weekly participate in recycling programs. This requirement also includes multifamily housing complexes of five units or more, regardless of the amount of solid waste generated each week. AB 341 is designed to reach California's recycling goal of 75 percent by the year 2020.

Organic Waste Reduction (SB 1383)

Effective September 2016, SB 1383 established two organic waste disposal reduction targets tied to the 2014 baseline of 23 million tons of organic waste disposal and must be achieved by 2020 and 2025. The target is set for 2020 at 50 percent organic waste reduction from 2014 baseline (11.5 million tons allowed landfill disposal of organic waste), and for 2025 at 75 percent organic waste reduction from 2014 baseline (5.75 million tons allowed landfill disposal of organic waste). The law grants CalRecycle the regulatory authority required to achieve the organic waste disposal reduction targets and establishes an additional target that not less than 20 percent of currently disposed edible food is recovered for human consumption by 2025.

California Public Utilities Commission

CPUC General Order 112E, which is based upon the Federal Department of Transportation Guidelines contained in Part 192 of the Federal Code of Regulations, specifies a variety of design, construction, inspection and notification requirements. The CPUC conducts annual audits of pipeline operations to ensure compliance with these safety standards. In addition, the SoCalGas has a safety program which has reduced the risk of gas distribution fires by improving

welds on the larger diameter (24- to 30-inch) pipelines and by replacing old distribution pipes with flexible plastic pipes. According to SoCalGas staff, high-pressure gas mains are common in developed areas throughout the country, and SoCalGas lines are inspected regularly and must comply with CPUC mandated safety requirements.

California Energy Commission

The California Energy Commission (CEC) was created as the state's principal energy planning organization in 1974, in order to meet the energy challenges facing the state in response to the 1973 oil embargo. The CEC is charged with six basic responsibilities when designing state energy policy:

- Forecasting statewide electricity needs;
- Licensing power plants to meet those needs;
- Promoting energy conservation and efficiency measures;
- Developing renewable energy resources and alternative energy technologies;
- Promoting research, development, and demonstration; and
- Planning for and directing state response to energy emergencies.

Title 24, California Code of Regulations, Part 6: Energy Efficiency Standards for Buildings

Title 24, Part 6, of the California Code of Regulations contains the CEC's Energy Efficiency Standards for Residential and Nonresidential Buildings. Title 24 was first established in 1978, in response to a legislative mandate to reduce California's energy consumption. Since that time, Title 24 has been updated periodically to allow for consideration and possible incorporation of new energy efficiency technologies and methods.

Title 20, California Code of Regulations, Sections 1601 et seq: Appliance Efficiency Regulations

The 2012 Appliance Efficiency Regulations (Title 20, CCR Sections 1601 through 1608) took effect February 13, 2013. The regulations include standards for both federally regulated appliances and non-federally regulated appliances.

Assembly Bill 1890

The CPUC regulates investor-owned electric power and natural gas utility companies in the State of California. Assembly Bill 1890, enacted in 1996, deregulated the power generation industry, allowing customers to purchase electricity on the open market. Under deregulation, the production and distribution of power that was under the control of investor-owned utilities (e.g., Southern California Edison) was decoupled. All new construction in the State of California is subject to the energy conservation standards set forth in Title 24, Part 6, Article 2 of the California Administrative Code. These are prescriptive standards that establish maximum energy consumption levels for the heating and cooling of new buildings. The utilization of alternative energy applications in development projects, while encouraged, is not required as a development condition. Such applications may include installation of photovoltaic solar panels, active solar

water heating systems, or integrated pool deck water heating systems, all of which serve to displace consumption of conventional energy sources (i.e., electricity and natural gas). Incentives, primarily in the form of state and federal tax credits, as well as reduced energy bills, provide a favorable basis.

Senate Bills 610 and 221

Enacted in 2002, SB 610, which was codified in the Water Code beginning with Section 10910, requires the preparation of a water supply assessment (WSA) for projects within cities and counties that propose to construct 500 or more residential units or the equivalent. SB 610 stipulates that when environmental review of certain large development projects is required, the water agency that is to serve the development must complete a WSA to evaluate water supplies that are or will be available during normal, single-dry, and multiple-dry years during a 20-year projection to meet existing and planned future demands, including the demand associated with Carson2040.

Enacted in 2001, SB 221, which was codified in the Water Code beginning with Section 10910, requires that the legislative body of a city or county, which is empowered to approve, disapprove, or conditionally approve a subdivision map, must condition such approval upon proof of sufficient water supply. The term "sufficient water supply" is defined in SB 221 as the total water supplies available during normal, single-dry, and multiple-dry years within a 20-year projection that would meet the projected demand associated with the proposed subdivision. The definition of sufficient water supply also includes the requirement that sufficient water encompass not only the proposed subdivision, but also existing and planned future uses, including agricultural and industrial uses.

Regional

Los Angeles County Code

Sewer

As previously discussed, the CSMD owns and maintains the local sanitary sewers within the city. As required under the County Code, a sewer area study must be prepared for all private contract sewer projects. As stipulated in the County Code, no sewer construction permit shall be issued until the County Engineer (Section 20.32.040) and the Public Works Director (Section 20.32.420) have approved the project's final sewer plans.

Drainage

The Los Angeles County Code contains specific provisions to regulate drainage discharge and storm water runoff quality from unincorporated areas, which do not apply directly to Carson as a city. However, management of the regional drainage system does involve requirements established by the Los Angeles County Flood Control District (LACFCD) and by the MS4 permit discussed above and in Section 3.9, *Hydrology and Water Quality*, of this Draft EIR. These requirements are implemented through provisions in the Carson Municipal Code.

Solid Waste

The LACPWD coordinates solid waste planning in the region through administration of the Integrated Waste Management Plan. In accordance with state requirements, this plan and its components establishes source reduction, recycling, and other programs necessary to achieve the reductions in per capita waste generation for disposal set in the Public Resources Code.

Greater Los Angeles County Region Integrated Regional Water Management Plan

The Greater Los Angeles County Region Integrated Regional Water Management Plan (GLACR IRWM) was updated in 2014. The IRWM Plan is a regional plan designed to improve collaboration in water resources management. The first IRWM Plan for GLACR IRWM was published in 2006 following a multi-year effort among water retailers, wastewater agencies, stormwater and flood managers, watershed groups, the business community, tribes, agriculture, and non-profit stakeholders to improve water resources planning in the Los Angeles Basin. It provides a mechanism for: 1) coordinating, refining, and integrating existing planning efforts within a comprehensive, regional context; 2) identifying specific regional and watershed-based priorities for implementation projects; and 3) providing funding support for the plans, programs, projects, and priorities of existing agencies and stakeholders.

Local

Water

As part of state and regional efforts towards water conservation, Article V, Sanitation and Health, Chapter 10, Water Conservation and Sustainability Measure, of the Carson Municipal Code includes requirements for water conservation and sustainability. The code requires recirculating water required for water fountains and decorative water features and commercial conveyor carwashes and the use of recycled or approved non-potable water for construction purposes. It is recommended that large, landscaped areas such as parks, cemeteries, golf courses, school grounds, and playing fields use irrigation systems with rain sensors that automatically shut off such systems during periods of rain or irrigation timers which automatically use information such as evapotranspiration sensors to set an efficient water schedule.

Sewer

Article VIII, Building Regulations – Sewage and Waste, Chapter 5, Sewage and Industrial Waste, of the Carson Municipal Code adopts Title 20, Utilities, Division 2, Sanitary Sewers and Industrial Waste, of the Los Angeles County Code, as amended. As stipulated in Section 20.32.040, Plan Approval Prerequisite to Issuance, no sewer construction permit shall be issued until the County Engineer has checked and approved the plans in accordance with Section 20.32.420 and the other applicable provisions of Division 2 of the County Code.

Drainage

Article V, Sanitation and Health, Chapter 8, Storm Water and Urban Runoff Pollution Control, of the Carson Municipal Code addresses storm water management and discharge control. This section incorporates at the city level, the storm water management practices that are required by federal and state law, and by the Los Angeles County Code requirements. Good housekeeping

provisions, requirements for industrial/commercial and construction activities, and storm water pollution control measures for new development and redevelopment projects are all addressed in this chapter. All new development and redevelopment projects are required to comply with the following conditions: (1) LID structural and nonstructural BMPs; (2) source control BMPs; and (3) structural and nonstructural BMPs for specific types of uses.

Solid Waste

Article V, Sanitation and Health, Chapter 2, Collection of Solid Waste and Recyclable Materials, of the Carson Municipal Code contains provisions that implement the source reduction and recycling programs and other measures to achieve per capita waste generation for disposal in accordance with state and County programs. The City requires all collectors operating under a collection franchise within the city to comply with applicable resource recovery and diversion programs to minimize solid waste disposal at landfills.

3.17.4 Project Impact Analysis

Thresholds of Significance and Methodology

Thresholds of Significance

Appendix G of the State CEQA Guidelines provides screening questions that address potential impacts related to a number of environmental issues. The CEQA guidelines provides that lead agencies may use the questions set forth in the Appendix G to assess the significance of a project's environmental effects, and the use of Appendix G as a significance threshold is routinely sanctioned by the courts (although such use is not mandatory). Based on the Appendix G questions regarding utilities/service systems, a project would have a significant impact if the project would:

- Threshold UTL-1:** Require or result in the relocation or construction of new or expanded water, wastewater treatment, stormwater drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects;
- Threshold UTL-2:** Have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years;
- Threshold UTL-3:** Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments;
- Threshold UTL-4:** Generate solid waste in excess of state or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals; or
- Threshold UTL-5:** Comply with federal, state, and local management and reduction statutes and regulations related to solid waste.

Methodology

The analysis in this section addresses impacts on public utilities and City infrastructure due to projected population growth that would result from the proposed General Plan update. Subsequent environmental review at the project level may be required to determine whether a specific development project would result in a significant environmental effect regarding the capacity for utility and service systems to adequately serve the future project, including such impacts from the construction of water distribution lines, wastewater collect system components, storm drainage conveyance pipes or facilities, or disposal of solid waste. Project-level review will occur when proposed development plans are prepared. This analysis is based on a review of relevant local and regional plans and background information.

Project Impact Analysis

Require New or Expanded Facilities

Threshold UTL-1: The Project would have a significant impact if future development allowed by Carson2040 would require or result in the relocation or construction of new or expanded water, wastewater treatment, stormwater drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects.

***Impact UTL-1** While the Project would not require or result in the relocation or construction of new or expanded water and wastewater treatment facilities, it could require or result in the relocation or construction of new or expanded stormwater drainage, electric power, natural gas, and telecommunications facilities. However, the construction or relocation of these facilities would not cause significant environmental effects. (Less than Significant)*

Implementation of the proposed General Plan update would allow for the potential development of future residential, commercial, office, and industrial land uses in the city of Carson. Additional population and employment growth would generate additional demand for water and wastewater services, and therefore, a potential increased demand for water provision and wastewater collection, conveyance, and treatment services over currently established levels. Additionally, potential future development could require upgrades to existing storm water, electric power, natural gas, and telecommunication facilities. As discussed below, existing facilities would be adequate to serve the projected buildout population, therefore impacts resulting from the proposed General Plan update would be less than significant.

Construction of Water Treatment Facilities

The MWD treats the surface water provided to the WBMWD and CBMWD at the F.E. Weymouth treatment plant located in La Verne. The facility has a capacity of 520 MGD and is currently treating an average of 224 MGD. As discussed below under Impact UTL-2, growth anticipated under the proposed General Plan update is expected to result in an increase of approximately 6.8 MGD of water over existing conditions. With an excess treatment capacity of 296 MGD, the F.E. Weymouth has sufficient remaining capacity to treat the full increase in water attributable to growth anticipated under the proposed General Plan update. Additionally, policies in the proposed General Plan update aim to conserve water through public education programs and the promotion of water-

conserving devices and practices in both new construction and major alterations as well as additions to existing buildings. Such policies would help to reduce the demand on existing water treatment infrastructure and allow for meaningful consideration of potential impacts of any future decisions regarding the provision of new infrastructure. For these reasons, growth under the proposed General Plan update is not expected to require or result in the relocation or construction of new or expanded water treatment facilities, and this impact would be less than significant.

Construction of Wastewater Treatment Facilities

Wastewater generated in the city of Carson is treated at the Joint Water Pollution Control Plant, which is located in Carson and operated by the LACSD. As discussed below under Impact UTL-3, the facility has sufficient remaining capacity to treat the full increase in sewage attributable to growth anticipated under the General Plan. Additionally, policies in the proposed General Plan update aim to conserve water by curbing demand for domestic and commercial purposes and promoting water conservation strategies, thus reducing demand for water, and in turn, the generation of wastewater. Therefore, growth under the General Plan is not expected to require or result in the relocation or construction of new or expanded water treatment facilities, and this impact would be less than significant.

Construction of Storm Drainage Facilities

As previously described, the LACFCD owns and maintains all major flood control channels. In addition, a majority of the storm drain system within the city was formally transferred through resolution to LACFCD, which maintains complete ownership and maintenance of the system. However, storm water quality is the responsibility of the City; see Section 3.9, *Hydrology and Water Quality*, of this Draft EIR, for additional information.

Storm water runoff may mobilize pollutants (e.g., trash, oil) and sediments, which contribute to pollution in rivers, lakes, and the ocean. Conversely, storm water runoff can be seen as a resource for recharging groundwater supplies. The state regulates storm water discharges through the NPDES program. The NPDES program was established to ensure storm water is used as a resource, while reducing any harmful pollutants to the greatest extent possible to maintain the beneficial uses of our rivers, lakes and ocean.

The RWQCBs have adopted NPDES permits to regulate storm water for municipalities. Under that permit is the Municipal Storm Water Program, which regulates storm water discharges from MS4s throughout California. An MS4 is defined as a conveyance or system of conveyances (including roads with drainage systems, municipal streets, catch basins, curbs, gutters, ditches, human-made channels, or storm drains) owned or operated by a local agency. In this area, the Los Angeles RWQCB holds the NPDES permit and Los Angeles County holds the MS4 permit. Carson is a co-permittee under the County's MS4 permit. The County's MS4 permit was last amended in November 2016. The permit details discharge prohibitions (i.e., monitoring and reporting, watershed management programs, control measures, and total maximum daily loads). In addition, the City of Carson has joined the Dominguez Channel Watershed Management Group, which was developed to implement the NPDES requirements on a watershed scale.

A key provision of these regulations requires that the initial (or "first flush") storm water runoff is detained and treated on-site prior to entering the County's storm drain system. First flush is the

initial surface runoff during a storm event that typically contain higher concentrations of pollutants compared to the remainder of the storm. Specifically, the County requires that projects mitigate the first three-quarter inch of rainfall for each storm event and be designed to minimize the introduction of pollutants from the site runoff into the storm water conveyance system. Any new development and/or significant redevelopment in the city will be subject to these requirements.

From a storm drain infrastructure perspective, these regulations restrict increases in storm water runoff from any new development and/or significant redevelopment. Therefore, existing storm drain conveyance systems will likely not require upsizing, regardless of changes to land use types. Should new storm drain conveyance infrastructure be required, construction of those facilities could result in adverse environmental effects. As all new storm drain conveyance infrastructure could be provided within and immediately surrounding the Planning Area, the potential impacts of these improvements are considered throughout the technical sections of this Draft EIR. In addition, future facilities would be required to comply with the City's requirements for construction projects, including but not limited to, grading permits and encroachment permits. Therefore, storm water generated by development allowed under the proposed General Plan update would not result in additional impacts related to the provision of storm drain infrastructure, and this impact would be less than significant.

Construction of Electrical Facilities

It is possible that development proposed under the General Plan could result in the provision of new electrical power facilities, including new or upgraded substations and/or transmission lines. However, all new development would be subject to the CALGreen code, which establishes mandatory energy efficiency measures for new residential and non-residential buildings. Compliance with current CALGreen requirements and proposed General Plan policies that promote renewable energy generation and energy efficiency would ensure that new development associated with the implementation of the proposed General Plan update would be energy efficient, thus reducing the need for new electrical power infrastructure. Should upgrades to new facilities be required, construction of those facilities could result in adverse environmental effects. As all new electrical power infrastructure could be provided within and immediately surrounding the Planning Area, the potential impacts of these improvements are considered throughout the technical sections of this Draft EIR. In addition, future facilities would be required to comply with the City's requirements for construction projects, including but not limited to, grading permits and encroachment permits. Therefore, project-related electricity demand would not result in additional impacts related to the provision of electrical power infrastructure, and this impact would be less than significant.

Construction of Natural Gas Facilities

It is possible that development proposed under the General Plan could result in the provision of new natural gas facilities, including new and/or upgraded pipelines. SoCalGas projects that total gas demand in its service area would decline at an annual rate of 1 percent from 2020–2035 due to modest economic growth and CPUC-mandated energy efficiency standards and projects,²⁵ Additionally, all new development would be subject to energy efficiency standards contained in the

²⁵ California Gas and Electric Utilities, 2020. 2020 California Gas Report. Available at: https://www.socalgas.com/sites/default/files/2020-10/2020_California_Gas_Report_Joint_Utility_Biennial_Comprehensive_Filing.pdf, Accessed October 2021.

CALGreen code, thus reducing the need for new natural gas infrastructure. Should upgrades be required, construction of those facilities could result in adverse environmental effects. As all new natural gas infrastructure could be provided within and immediately surrounding the Planning Area, the potential impacts of these improvements are considered throughout the technical sections of this Draft EIR. In addition, future facilities would be required to comply with the City's requirements for construction projects, including but not limited to, grading permits and encroachment permits. Therefore, project-related natural gas demand would not result in additional impacts related to the provision of natural gas infrastructure, and this impact would be less than significant.

Construction of Telecommunications Facilities

It is possible that development proposed under the General Plan could result in the provision of new telecommunication facilities. Should upgrades to telecommunication infrastructure be required, construction of those facilities could result in adverse environmental effects. As all new telecommunication infrastructure could be provided within and immediately surrounding the Planning Area, the potential impacts of these improvements are considered throughout the technical sections of this Draft EIR. In addition, future facilities would be required to comply with the City's requirements for construction projects, including but not limited to, grading permits and encroachment permits. Therefore, project related demand for new telecommunications services would not result in additional impacts related to the provision of telecommunication infrastructure, and this impact would be less than significant.

Proposed General Plan Policies that Address the Impact

Open Space and Environmental Conservation

Guiding Policies

- | | |
|-----------|---|
| OSEC-G-10 | Provide for utilities and infrastructure to deliver safe, reliable services for current and future residents and businesses. |
| OSEC-G-12 | Promote water conservation strategies in the community by increasing awareness and expanding access to programs. |
| OSEC-G-13 | Encourage integration of water conservation measures for both existing and new development, and promote utilization of recycled water for appropriate uses. |
| OSEC-G-14 | Promote sustainable energy generation practices to support energy security that is resilient to blackouts and other climate or anthropogenic disasters. |
| OSEC-G-15 | Implement programs and work with jurisdictional partners to increase sustainable energy production and energy security. |
| OSEC-G-25 | Demonstrate leadership by reducing the use of energy and fossil fuel consumption in municipal operations, including transportation, waste and water reduction, recycling, and by promoting efficient building design and use. |

Implementing Policies

- | | |
|-----------|---|
| OSEC-P-23 | Safely manage the water supply and services, wastewater, sewer, recycled water, and storm drain infrastructure in a manner that provides for future growth of the city. |
|-----------|---|

- OSEC-P-24 Prepare an updated Sewer System Management Plan that meets Statewide General Waste Discharge Requirements and qualifies as a Monitoring and Reporting Program for sanitary sewer systems. Conduct audits every three years and update the plan every five years or as necessary.
- OSEC-P-27 Promote education for residents and businesses on the benefits of conserving water and explore incentives for lowering water usage.
- OSEC-P-28 Establish guidelines and standards for water conservation and actively promote the use of water-conserving devices and practices in both new construction and major alterations as well as additions to existing buildings. Strategies include:
- Requiring water-conserving design and equipment in new construction
 - Encouraging retrofitting with water-conserving devices
 - Requiring Low Impact Development principles and guidelines during site design
 - Promoting the use of greywater in large developments for non-potable water uses
- OSEC-P-29 Promote renewable energy generation and storage to decrease reliance on outside sources and minimize impacts from blackouts.
- Potential strategies include:*
- *Incentivize solar panel deployment beyond state’s mandates and pursue state, regional, and federal funding programs designed to reduce energy demand through conservation and efficiency. Establish guidance on placement of solar panels to minimize impacts to aesthetic resources.*
 - *Promote renewable energy generation on City-owned sites and deployment of micro-grids for energy independence and lifeline operations in the event of power shutdowns.*
 - *Reduce reliance on backup generators that rely on fossil fuels by establishing citywide program to transition to more climate friendly options including battery storage, solar-powered generators, and small-scale wind turbines in appropriate areas.*
 - *Promote alternative modes of electricity generation—such as wind, solar, biomass, geothermal, and hydroelectric—and invest in electric storage infrastructure at the city-wide level.*
 - *Increase installation of electric vehicle charging stations with funding from state and federal sources.*
 - *Convert street lighting, water pumping, water treatment, and other energy-intensive operations to more efficient technologies.*
- OSEC-P-41 Encourage efficient, clean energy and fuel use through collaborative programs, award programs, and incentives, while also removing barriers to the expansion of alternative fuel facilities and infrastructure.

- OSEC-P-51 Use the CAP as the City’s primary strategy to reduce GHG emissions, including strategies related to land use and transportation, energy efficiency, solid waste, urban greening, and energy generation and storage.
- OSEC-P-57 Facilitate energy efficiency in building regulations, providing flexibility to achieve specified energy performance levels and requiring energy efficiency measures as appropriate.
- OSEC-P-58 Support sustainability measures to reduce and conserve municipal and private energy uses, especially from commercial and industrial uses which consume 78 percent of the city’s total electric usage.
- OSEC-P-59 Coordinate with the business and industrial community to encourage energy efficiency in the city’s largest energy users while supporting economic growth objectives.

Mitigation Measures

None required.

Water Supply

Threshold UTL-2: The Project would have a significant impact if sufficient water supplies were not available to serve future development allowed by Carson2040 and reasonably foreseeable future development during normal, dry and multiple dry years.

Impact UTL-2: Sufficient water supplies are available to serve future development allowed by the Project and reasonably foreseeable future development during normal, dry and multiple dry years. (Less than Significant)

As discussed above, the city of Carson is served by two water service providers, Cal Water and GSW. Cal Water Dominguez District serves most of Carson through a combination of local groundwater and surface water purchased from MWD. The anticipated water demand changes rely on per capita water consumption. As presented in Cal Water’s 2020 Urban Water Management Plan, the Cal Water Dominguez District service area is currently using 157 gallons of water per capita per day (GPCD).²⁶

GSW serves the northwest corner of Carson and also provides its customers with a combination of local groundwater and surface water purchased from the MWD.²⁷ As presented in GSW’s 2020 Urban Water Management Plan, the service population was 278,787 in the year 2020. With a demand for potable and non-potable water in the year 2020 of 26,228 AF per year (23,414,849 gallons per day), the GSW service area is currently using 84 gallons of water per GPCD.²⁸

Cal Water serves the majority of the city and has a higher per capita water use estimate than GSW. Therefore, based on estimated population increase of 43,600 residents due to

²⁶ California Water Service, 2021. 2020 Urban Water Management Plan (Dominguez District). June 2021.

²⁷ Golden State Water Company, 2021. 2020 Urban Water Management Plan Southwest Service Area. July 2021.

²⁸ Golden State Water Company, 2021. 2020 Urban Water Management Plan Southwest Service Area. July 2021.

implementation of the proposed General Plan update and a water use rate of 157 GPCD, water demand within the Planning Area would increase by approximately 6.8 MGD.

As stated in the 2020 UWMP for Cal Water, purchased water is 100 percent reliable and would make up the differences between demand and other projected supplies (groundwater and recycled water). As a result, Cal Water has adequate supplies to meet demand under normal, single dry year, and five consecutive dry year conditions through the year 2045, which is five years beyond the horizon year of the proposed General Plan update in 2040. In addition, as stated in the GSW 2020 UWMP, GSW also has reliable supplies to meet demand under normal, single dry year, and five consecutive dry year conditions through the year 2045. While it is expected that there will be sufficient water supplies available to serve the development associated with the proposed General Plan update from existing entitlements and resources, growth under the proposed update was not specifically accounted for in the UWMP for each local water provider. However, as UWMPs are based on adopted land use forecasts and plans, Cal Water and GSW would be required to account for this growth during the next UWMP update cycle in 2025, and thus they would have sufficient time to account for future development in the city in their planning process prior to the proposed General Plan update's horizon year of 2040. In addition, individual development proposals that meet the definition of a project under CEQA would be required to address water supply as part of the CEQA process, and for qualifying projects, a WSA would be required pursuant to SB 610 for inclusion in the project's CEQA analysis. The WSA discerns whether the expected demand from the development being proposed has been accounted for in the forecasted demands in the most recent UWMP. A Written Verification of Supply per SB 221 is prepared as a condition of approval for a subdivision map of 500 units or more. Considered a fail-safe mechanism to provide sufficient evidence that adequate water supplies are available before construction begins, the Written Verification of Supply is also prepared/adopted by the water supplier and approved by the land use authority. Depending on the project, one or both of these analyses may be required.

In addition, the City is taking several steps to decrease its reliance on imported water and overall water demand. For example, the City partners with the WBMWD to encourage residents to conserve water through programs such as the Water for Tomorrow Program, which seeks to protect the district's existing water supply as well as diversify and augment its sources. The City also requires projects to comply with CARSONSCAPE, the City's Model Water Efficient Landscape Ordinance (MWELo), which promotes the values and benefits of landscaping practices that integrate conservation and efficient use of water through planning, design, installation, maintenance, and management of water-efficient landscapes in new construction and rehabilitated projects.²⁹

Next, water providers in Carson such as Cal Water promote water conservation through rebates, conservation kits (which include high-efficiency showerheads, hose nozzles, faucet aerators, and toilet leak tablets), the Smart Landscape Tune-Up Program, and the H2O Challenge educational program.

²⁹ City of Carson, 2021. CARSONSCAPE: Model Water Efficient Landscape Ordinance. Available at: <https://ci.carson.ca.us/communitydevelopment/MWELo.aspx>, Accessed October 2021.

Furthermore, all new development would also be subject to water conservation standards contained in the CALGreen code. Compliance with current CALGreen requirements would ensure that new development associated with the implementation of the proposed General Plan update would establish water conservation features.

Equally important, implementation of policies in the proposed General Plan update would reduce the overall existing and future water usage in the city by curbing demand for domestic and commercial purposes and promoting water conservation strategies. Proposed policies also seek to ensure the long-term quality and maintenance of water supplies by requiring the City to work with Cal Water, GSW and MWD to ensure adequate availability of water to meet future needs.

Finally, in the event of a water shortage, Cal Water and GSW would rely on their Water Shortage Contingency Plans (WSCP), which are to be engaged in the case of a water shortage event, such as a drought or supply interruption. The WSCPs for both Cal Water and GSW include six levels to address shortage conditions ranging from up to 10 percent to greater than 50 percent shortage, identifies a suite of demand mitigation measures to implement at each level, and identifies procedures to annually assess whether or not a water shortage is likely to occur in the coming year.^{30, 31}

For these reasons, sufficient water supply would be available to serve future development allowed under the proposed General Plan update during normal, dry, and multiple dry years. Therefore, the impact with respect to water supply would be less than significant.

Proposed General Plan Policies that Address the Impact

Guiding Policies OSEC-10, OSEC-G-12 and OSEC-G-13, and Implementing Policies OSEC-P-23, OSEC-P-27 and OSEC-P-28, as discussed under Impact UTL-1, in addition to the following:

Open Space and Environmental Conservation

Implementing Policies

- | | |
|-----------|--|
| OSEC-P-25 | Through partnership with the Los Angeles County Sanitation Districts, promote utilization of recycled water created under the RRWP for non-potable water needs. |
| OSEC-P-26 | Work with California Water Service Company, Golden State Water Company, and Metropolitan Water District to ensure adequate availability of water to meet future needs. |

Mitigation Measures

None required.

³⁰ Golden State Water Company, 2021. 2020 Urban Water Management Plan Southwest Service Area. July 2021.

³¹ California Water Service, 2021. 2020 Urban Water Management Plan (Dominguez District). June 2021.

Wastewater Service Capacity

Threshold UTL-3: The Project would have a significant impact if future development allowed by Carson2040 would result in a determination by the wastewater treatment provider which serves or may serve the project that it has inadequate capacity to serve the project's projected demand in addition to the provider's existing commitments.

Impact UTL-3: *The Project would not result in a determination by the wastewater treatment provider which serves or may serve the project that it has inadequate capacity to serve the Project's projected demand in addition to the provider's existing commitments. (Less than Significant)*

Growth anticipated under the proposed General Plan update would generate additional wastewater. It is estimated that about 90 percent of the per capita water consumption becomes wastewater flows. As a result, it is estimated that growth anticipated under the proposed General Plan update would result in an increase of approximately 6.1 MGD (i.e., expected water use times wastewater generation factor) of wastewater over existing conditions.

Wastewater generated in the city of Carson is treated at the Joint Water Pollution Control Plant, which is located in Carson and operated by the LACSD. The plant has a design capacity of 400 MGD and currently treats an average of 260 MGD. Based on current treatment levels at the Joint Water Pollution Control Plant and the design capacity, the facility has sufficient remaining capacity to treat the full increase in sewage attributable to growth anticipated under the General Plan.

Additionally, policies in the proposed General Plan update aim to conserve water by curbing demand for domestic and commercial purposes and promoting water conservation strategies, thus reducing demand for water, and in turn, the generation of wastewater. Furthermore, current regulations would not allow development without adequate utility capacity, including wastewater treatment capacity. Potential future development projects would be reviewed by the City and LACSD to determine that sufficient capacity exists to serve the development.

For the reasons stated above, adequate wastewater treatment capacity would exist to treat growth anticipated under the proposed General Plan update in addition to LACSD's existing commitments. Therefore, the impact with respect to wastewater treatment capacity would be less than significant.

Proposed General Plan Policies that Address the Impact

Guiding Policies OSEC-G-10, OSEC-G-12, and OSEC-G-13, and Implementing Policies OSEC-P-23, OSEC-P-27, and OSEC-P-28, as discussed under Impact UTL-1.

Mitigation Measures

None required.

Solid Waste

Threshold UTL-4: The Project would have a significant impact if future development allowed by Carson2040 would generate solid waste in excess of state or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals.

***Impact UTL-4:** The Project would not generate solid waste in excess of state or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals. (Less than Significant)*

As described above, the city receives refuse pickup and disposal service from Waste Resources and EDCO Disposal and Waste Management Services. Once collected from areas within the city, the majority of refuse (88 percent) is delivered to H.M Holloway Inc., El Sobrante, and Chiquita Canyon landfills. According to CalRecycle, the H.M. Holloway Inc. Landfill has a remaining capacity of approximately seven million tons, and is expected to remain in operation until 2030, the El Sobrante Landfill has a remaining capacity of about 144 million tons, and it is expected to remain in operation until 2051, and the Chiquita Canyon Sanitary landfill has a remaining capacity of 60 million tons, and is expected to remain in operation until 2047.

In 2019, the most recent year data was available, Carson disposed about 14.1 pounds per resident per day (PPD) of waste to landfills. Although the annual per capital disposal rate has been increasing since 2014, both the per resident and per employee disposal rates are less than their respective targets calculated by CalRecycle (19.3 and 37.3, respectively, as of June 2021)

Using a PPD disposal rate of 14.1 and a projected increase in population of 43,600, it is estimated that a total increase of 614,760 PPD or 112,194 tons per year would be disposed of at buildout of the proposed General Plan update. Therefore, although H.M. Holloway Inc. Landfill is expected to remain open until 2030 and would close prior to the anticipated buildout of the proposed General Plan update, solid waste generated under the update would reasonably be within the capacity of other facilities serving the city. For example, the 112,194 tons per day generated by the increase in population under the proposed General Plan update represents 0.1 and 0.2 percent of remaining capacity of the El Sobrante and Chiquita Canyon landfills, respectively.

As indicated above, the LACPWD prepares and administers the Countywide Integrated Waste Management Plan (IWMP). For the current planning period from 2017 to 2032, the IWMP Annual Report estimates that a shortfall in permitted solid waste disposal capacity is not anticipated for the County. The IWMP also states that the cumulative need at the County level for Class III landfill disposal capacity, approximately 126.4 million tons in 2032, will not exceed the 2017 remaining permitted Class III landfill capacity of 167.6 million tons.

Given the remaining capacity at currently landfills serving the city and the County's ability to meet its disposal targets, meeting the collection, transfer, recycling, and disposal needs of the proposed General Plan update would not result in adverse impacts on landfill facilities. It is also likely that changes in regulations will occur that will decrease the need for landfill capacity through new recycling measures (e.g., conversion technology facilities, material recovery

facilities, waste resource projects). Compliance with solid waste regulations and proposed General Plan policies that promote recycling would further address potential impacts.

For the reasons stated above, growth anticipated under the proposed General Plan update would not generate solid waste in excess of state or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals. Therefore, the impact with respect to solid waste disposal capacity would be less than significant.

Proposed General Plan Policies that Address the Impact

Open Space and Environmental Conservation

Guiding Policies

OSEC-G-16 Reduce the generation of solid waste, including hazardous waste, and promote recycling of materials to reduce waste accumulation slow in local and regional landfills.

Implementing Policies

OSEC-P-30 Continue to work toward reducing solid waste, increasing recycling, and complying with the Los Angeles County Integrated Waste Management Plan.

OSEC-P-31 Expand educational outreach about solid waste reduction and recycling programs and work to provide programs and informational materials in multiple languages.

OSEC-P-32 Further the City's goals to promote recycling, composting, and source reduction services for residential and commercial uses to divert 75% (or more) of waste from landfills by 2022 and maintain diversion at 75% or greater through 2040. See Assembly Bill No. 341 for additional information regarding waste diversion.

Mitigation Measures

None required.

Solid Waste Regulations

Threshold UTL-5: The Project would have a potentially significant impact if future development allowed by Carson2040 would not comply with federal, state, and local management and reduction statutes and regulations related to solid waste.

Impact UTL-5: *The Project would comply with federal, state, and local management and reduction statutes and regulations related to solid waste. (Less than Significant)*

AB 939 mandated that California generate a 25 percent diversion rate by 1995 and a 50 percent diversion rate by 2000. AB 341, adopted in 2012, requires that commercial enterprises that generate four cubic yards or more of solid waste and multi-family housing complexes of five units or more weekly participate in recycling programs in order to meet California's goal to recycle 75 percent of its solid waste by 2020. SB 1383, adopted in 2016, establishes goals of 50 percent organics waste reduction by 2020 and 75 percent reduction by 2025.

Development under the proposed General Plan update would be required to comply with federal, state, and local statutes and regulations related to solid waste. Furthermore, the policies provided in the proposed General Plan update require the City to expand educational outreach about solid waste reduction and recycling programs and to divert 75 percent (or more) of waste from landfills by 2022 and maintain a diversion rate of 75 percent or greater through 2040. For these reasons, growth anticipated under the proposed General Plan update would comply with federal, state, and local management and reduction statutes and regulations related to solid waste. Therefore, the impact with respect to solid waste regulations would be less than significant.

Proposed General Plan Policies that Address the Impact

Guiding Policy OSEC-G-16 and Implementing Policies OSEC-P-30, OSEC-P-31, and OSEC-P-32 as discussed under Impact UTL-4.

Mitigation Measures

None required.

3.17.5 Cumulative Impact Analysis

Water

Water Treatment

The geographic context for the analysis of cumulative impacts associated with water treatment infrastructure would be the service area of the F.E Weymouth Treatment Plant. Past cumulative development in the service area of the facility has resulted in increased demand for water treatment as growth occurs. The F.E Weymouth Treatment Plant is currently operating below its design capacity. However, while not likely, given that the plant has a remaining capacity of approximately 57 percent, future development in the area, including growth anticipated under the proposed General Plan update, could result in the plant nearing capacity if upgrades are not planned, thus resulting in a potential cumulative impact with respect to wastewater capacity. However, the project's contribution to this impact would not be cumulatively considerable as policies in the proposed General Plan update aim to conserve water by curbing demand for domestic and commercial purposes and promoting water conservation strategies, thus reducing demand for water, and in turn, demand for water treatment.

Water Supply

The geographic context for the evaluation of cumulative impacts with regard to water supply would be the service areas of the MWD, which supplies surface water to the WBMWD and CBMWD. Past cumulative development in MWD's service area has required additional water entitlements to accommodate the increased water demand. However, the MWD has consistently stated that its water supplies are fully reliable to meet the demands of its customers, in all hydrologic conditions through at least 2045.³²

Future development under the proposed General Plan update be evaluated by the City on a project-by-project basis to determine potential impacts to water supplies. The continued

³² Metropolitan Water District of South California, 2021. 2020 Urban Water Management Plan. June 2021.

assessment of individual projects for impacts to water supply would assure projects would only be approved if adequate water supplies exist at the time of their implementation. All future development would be subject to all applicable federal, state, and local laws, ordinances, and regulations in place for water supply. Therefore, the project's contribution to any potential water supply impact would not be cumulatively considerable.

Wastewater Capacity

The geographic context for the analysis of cumulative impacts associated with sewage treatment systems would be the service area of the Joint Water Pollution Control Plant. While not likely, given that the plant has a remaining capacity of 35 percent, future development in the area, including growth anticipated under the proposed General Plan update, could result in the plant nearing capacity if upgrades are not planned, thus resulting in a potential cumulative impact with respect to wastewater capacity. However, the project's contribution to this impact would not be cumulatively considerable as policies in the proposed General Plan update aim to conserve water by curbing demand for domestic and commercial purposes and promoting water conservation strategies, thus reducing demand for water, and in turn, the generation of wastewater.

Solid Waste

The geographic context for the analysis of cumulative impacts associated with solid waste would be the service area of the landfills that receive solid waste from the city of Carson, which is mainly Los Angeles County. Although the landfills serving the city are expected to have sufficient capacity to serve existing and planned development in the future, any existing capacity that currently exists within the landfill's boundaries is finite. Thus, solid waste generation from future development in the County, including anticipated growth under the proposed General Plan update, could exacerbate regional landfill capacity issues in the future, thus resulting in a potential cumulative impact with respect to solid waste disposal capacity. However, the project's contribution to this impact would not be cumulatively considerable as compliance with solid waste regulations and proposed General Plan policies would reduce the amount of solid waste generated in the city.

CHAPTER 4

Alternatives

4.1 Introduction

This chapter of the EIR evaluates alternatives to the Carson 2040 General Plan Update (“Project”) and analyzes the comparative environmental impacts associated with each alternative. Under CEQA, and as indicated in California Public Resources Code Section 21002.1(a), the identification and analysis of alternatives to a project is a fundamental aspect of the environmental review process intended to consider ways to mitigate or avoid the significant environmental effects of a project.

Guidance regarding the definition of project alternatives is provided in State CEQA Guidelines Section 15126.6(a) as follows:

An EIR shall describe a range of reasonable alternatives to the project, or to the location of the project, which would feasibly attain most of the basic objectives of the project but would avoid or substantially lessen any of the significant effects of the project, and evaluate the comparative merits of the alternatives.

The State CEQA Guidelines emphasize that the selection of project alternatives be based primarily on the ability to reduce significant impacts relative to the proposed project, “even if these alternatives would impede to some degree the attainment of the project objectives, or would be more costly.” (Section 15126.6(b)) The State CEQA Guidelines further direct that the range of alternatives be guided by a “rule of reason,” such that only those alternatives necessary to permit a reasoned choice are analyzed. (Section 15126.6(f)).

In selecting project alternatives for analysis, potential alternatives should be feasible. The State CEQA Guidelines Section 15126.6(f)(1) explains that:

Among the factors that may be taken into account when addressing the feasibility of alternatives are site suitability, economic viability, availability of infrastructure, general plan consistency, other plans or regulatory limitations, jurisdictional boundaries (projects with a regionally significant impact should consider the regional context), and whether the proponent can reasonably acquire, control or otherwise have access to the alternative site.

The State CEQA Guidelines require the analysis of a “no project” alternative and, depending on the circumstances, evaluation of alternative location(s) for the project, if feasible. Based on the alternatives analysis, an environmentally superior alternative is to be designated. In general, the environmentally superior alternative is the alternative with the least adverse impacts on the

environment. If the environmentally superior alternative is the “no project” alternative, the EIR shall also identify another environmentally superior alternative among the other alternatives. (Section 15126.6(e)(2))

Section 15126.6(d) of the State CEQA Guidelines states that alternatives analysis need not be presented in the same level of detail as the assessment of the proposed project. Rather, the EIR is required to provide sufficient information to allow meaningful evaluation, analysis and comparison with the proposed project. If an alternative would cause one or more significant impacts in addition to those of the proposed project, analysis of those impacts is to be discussed, but in less detail than for the proposed project.

4.2 Objectives of the Project

The Project will establish the course for the next two decades for the city to foster a vibrant and sustainable community, respond to an increasingly diverse and aging population, and addresses the myriad of physical, environmental, and other challenges that the city faces. The policies included the proposed General Plan update are intended to respond to these challenges. At the outset of the General Plan update process, the following specific objectives were established for the Project:

- Work with the community to articulate a vision for the city, and translating this vision into a viable implementation program;
- Ensure balanced land use development that benefits residents and businesses;
- Foster transportation improvements that allow people to easily and safely get around the city by driving, walking, biking, and/or taking transit;
- Enhance quality of life and community character;
- Improve the City’s fiscal and economic health;
- Revitalize the community for a diverse, aging, and changing population;
- Coordinate with regional planning initiatives and state mandates regarding sustainability, greenhouse gas emissions, and environmental justice;
- Establish a long-range vision that reflects the aspirations of the community and outlines steps to achieve this vision;
- Establish long-range development policies that will guide City departments, as well as Planning Commission, City Council, and City department decision-making;
- Provide a basis for judging whether specific development proposals and public projects are in harmony with plan policies;
- Plan in a manner that meets future needs based on the projected population and job growth;
- Allow City departments, other public agencies, and private developers to design projects that will preserve and enhance community character and environmental resources, and minimize hazards;
- Provide the basis for establishing and setting priorities for detailed plans and implementing programs, such as the zoning ordinance, subdivision regulations, specific and master plans, the Capital Improvement Program, the Housing Element, and the Local Hazard Mitigation Plan; and
- Reduce community-wide GHG emissions consistent with statewide targets.

4.3 Alternatives Considered and Rejected

As discussed above, the State CEQA Guidelines Section 15126.6(c) recommends that an EIR identify alternatives that were considered for analysis but rejected as infeasible and briefly explain the reasons for their rejection. According to the State CEQA Guidelines, the following factors may be used to eliminate alternatives from detailed consideration: the alternative’s failure to meet most of the basic project objectives, the alternative’s infeasibility, or the alternative’s inability to avoid significant environmental impacts.

The following is a discussion of the land use alternatives considered during the scoping and planning process and the reasons why they were not selected for detailed analysis in this Draft EIR. Three alternatives (Core, Centers, and Corridors) were developed during the third phase of the General Plan planning process and input on these were collected from community members through an online survey, community workshops, decision-maker meetings, and General Plan Advisory Committee meetings.

The alternatives represented different scenarios for accommodating the city’s growth needs and accomplishing the vision established in the first phase of the planning process. There are three basic distinctions between the alternatives: (1) the overall amount of growth and the balance between various uses; (2) the geographic strategy for this growth; and (3) the variation in density and intensity of growth. While each alternative is unique, all three share several common characteristics that are meant to act as guiding principles throughout the alternatives process:

- Enhance neighborhood connectivity, including pedestrian and bicycle networks;
- Create a continuous park/trail along the Dominguez Channel that serves as a “green spine” throughout the city;
- Continue the energy and design of Carson Street into other parts of the city;
- Create land use buffers between residential and industrial uses;
- Create neighborhood-serving retail near California State University, Dominguez Hills, and in the southern part of the city;
- Preserve existing single-family neighborhoods; and
- Retain and expand key industrial areas.

Ultimately, the Project is a combination of key elements from all three (Core, Centers, and Corridors) in regard to land use and approach.

4.3.1 Core Alternative

The Core Alternative seeks to concentrate new development in a central area in the city, expanding on the energy and success of recent development along Carson Street. New development would be concentrated in approximately a 1.5-mile radius from Carson Street and Avalon Boulevard, resulting in a vibrant, connected core area with a diverse mix of uses. Streetscape, pedestrian, and bicycle-way improvements would be focused in this core area to promote active, walkable environments, with easy access to stores, services, parks, and other public uses. Additional development would occur in select focus areas outside of this core.

The mixed-use pattern of new development along Carson Street is envisioned to expand along the portion of the corridor between I-110 and Wilmington Avenue. A density increase overlay would be located on the blocks north and south of Carson Street to provide additional housing that would reflect a density more similar to a “downtown.” Avalon Boulevard would connect the inner core area to key large-scale development opportunities along Interstate 405 (I-405), including the 157-acre opportunity site where The District at South Bay project is proposed, as well as the South Bay Pavilion Mall.

Victoria Golf Course would be redeveloped as an “innovation center” that would provide contemporary office buildings and workplaces, with higher density development than found elsewhere in Carson. This area would be designed from the ground up to accommodate a variety of businesses—including, for example, financial and technology offices—in an integrated, walkable setting, connected with the other parts of the community by a “green spine” along the Dominguez Channel. As this area was formerly used as a landfill, higher development intensities, including buildings ranging from six to 12 stories tall, may have been necessary to justify remediation or working within the environmental constraints.

The Core Alternative would include a large, central city park with portions of research and development (R&D) uses on the Shell site. The area north of I-405, between Dominguez Channel and SR-91, would be a transitional area between the core and industrial uses near the city’s northern border. This transition zone would create a buffer between residential and industrial uses, providing live-work units, light industrial and manufacturing uses (e.g., breweries or coffee roasteries), R&D office parks, and neighborhood commercial uses in close proximity to California State University, Dominguez Hills. Overall, the Core Alternative emphasizes Carson Street and Avalon Boulevard, including potential redevelopment of City Hall, as connectors to new regional centers.

The Core Alternative was not considered for further analysis since it would not meet the basic project objectives of revitalizing other portions of the city, including underutilized commercial properties along the corridors and locating additional services near existing residential areas. This alternative envisions the Victoria Golf Course as an “innovation center” with office building six to twelve stories tall. Development of the Victoria Golf Course at the scale envisioned was found to be infeasible due to the hazardous conditions of the closed landfill. In addition, Los Angeles County owns and maintains the course and is proposing redevelopment of the site as The Creek at Dominguez Hills, a recreation complex that would include a multi-use indoor sports complex, youth learning experience facility, indoor skydiving facility, marketplace, clubhouse, recreation and dining center, restaurant uses, and a sports wellness center. The Core Alternative was also not considered further since new development to be built on the Core was incorporated into the Project.

4.3.2 Centers Alternative

The Centers Alternative focuses on nodal development throughout the city. Each node or center would contain a different mix of uses, depending on location and available opportunity sites, with each node containing various housing, employment, and commercial uses in a walkable, higher-density pattern. These centers would not only accommodate new projected growth in the community, but would also act as focus areas for the surrounding neighborhoods, providing stores and services to existing neighborhoods that lack such uses and an improved pedestrian-

scaled public realm with cafés, restaurants, and public gathering places. The radius around each node would be approximately one-half mile, or a ten-minute walking distance, in order to keep development walkable.

Carson Street redevelopment was envisioned to expand, though concentrated around the intersections of Carson and Main streets, along Carson Street and Avalon Boulevard, and at densities somewhat lower than envisioned in the Core Alternative. Additional centers would occur in the vicinity of Main Street and Del Amo Boulevard, which complements development of The District at South Bay and would take advantage of proximity to major highways. The South Bay Pavilion would be another center, which would provide retail and visitor commercial (i.e., hotels, entertainment) uses close to the major thoroughfares and transitions into mixed-use, office, and industrial flex uses further from the highway. In another center, industrial flex and intensification of underutilized industrial parcels would create an employment-centered mixed-use area in proximity to the Del Amo Blue Line Station. Other centers would provide more housing and commercial near California State University, Dominguez Hills, and in the southern portion of the city around Main Street and Sepulveda Boulevard.

The centers would be connected via arterial streets redeveloped as greenways that would improve mobility and provide a consistent, welcoming image for the city of Carson. Additional density would occur in the city's industrial areas. While some of the opportunity sites identified in this alternative were similar to the Core Alternative, they were proposed at different densities and with different uses.

The Centers Alternative focused on development of central “nodes”, which contains various housing, employment, and commercial uses in a walkable, higher-density pattern, to help enliven certain portions of the city. While this planning intention is good in theory, this alternative was not considered for further analysis since the sites that were chosen for land use changes were ultimately determined to be infeasible due to existing land use limitations and the City's desire to retain some of these areas as industrial. Furthermore, this alternative largely focused development only within these certain nodes and does not meet the basic project objective of revitalizing other portions of the city, particularly along major corridors and other key opportunity sites. The Centers Alternative was also not considered further since the Project incorporates a similar concept, called Neighborhood Villages, which seeks to achieve the same planning outcome of walkable, mix-use centers throughout the city.

4.4 Alternatives Selected for Analysis

As described above, according to CEQA Guidelines Section 15126.6 (a) the purpose of analyzing project alternatives is to identify alternatives that “...*would avoid or substantially lessen any of the significant effects of the project.*” According to Section 15126.6(e) an EIR alternatives analysis should include the analysis of a No Project Alternative to allow decision makers to compare the impacts of approving a proposed project with the impacts and foreseeable future of not approving that project.

As indicated in Chapter 3.0, *Environmental Setting, Impacts, and Mitigation Measures*, of this EIR, Project impacts would be less than significant or less than significant with mitigation

incorporated for the majority of the environmental topics evaluated. The Project would however have significant unavoidable impacts associated with air quality, historical resources, and transportation (VMT). The alternatives evaluated in this chapter have been formulated to reduce the magnitude of the Project’s environmental impacts, to consider suggested alternatives provided by the public in the scoping process, and to inform the decision-making process. The alternatives analyzed include:

- Alternative 1 – No Project Alternative
- Alternative 2 – Corridors Alternative

Alternative 1, the No Project Alternative, is required pursuant to Section 15126.6(e) of the CEQA Guidelines and represents a scenario where the Project is not implemented and the existing General Plan remains in effect. **Table 4-1, Comparison of Key Projected Characteristics**, compares key projected characteristics for each alternative.

**TABLE 4-1
COMPARISON OF KEY PROJECTED CHARACTERISTICS**

	Existing Baseline (2021)	Project Change from Existing (2021–2040)	Alternative 1: No Project Change from Existing (2021–2040)	Alternative 2: Corridors Change from Existing (2021–2040)
Population	98,100	43,600	18,953	34,106
Housing Units	28,410	13,730	5,223	9,880
Employment	77,561	18,904	18,140	19,222
Retail Jobs	21,107	4,504	-823	-1,251
Office Jobs	25,799	8,740	9,590	7,510
Industrial Jobs	26,693	5,092	9,294	12,387
Public/Institutional/ Other Jobs	3,962	568	79	576

¹ Existing (2021) numbers are derived from Project buildout calculations for the entire Planning Area.

² Calculations in this table are for the entire Planning Area and include the sphere of influence.

SOURCE: City of Carson, 2022. *Carson2040 General Plan*. Prepared by Dyett and Bhatia.

4.4.1 Alternative 1 – No Project

Consistent with Section 15126.6(e)(2) of the State CEQA Guidelines, the No Project Alternative represents what would be reasonably expected to occur in the foreseeable future if the Project were not adopted and the City’s current General Plan was left unchanged. This alternative would retain all current land use designations and definitions from the current General Plan as amended to date, and future development in the Planning Area would continue to be subject to existing policies, regulations, development standards, and land use designations of the existing Carson General Plan. Specifically, the area around the Core would not be designated as Downtown Mixed Use nor would the corridors have the Corridor Mixed Use designation, both of which allows for greater development within these areas. Further, there would be no new Flex District

or Business Residential Mixed Use land use designations which allow for a greater variety and intensity of uses.

All change areas as identified in the Project would retain their existing 2004 General Plan designations. Policies concerning topics such as transportation, economic development, parks, open space, the environment, climate change, environmental justice, health, and housing would also remain unchanged.

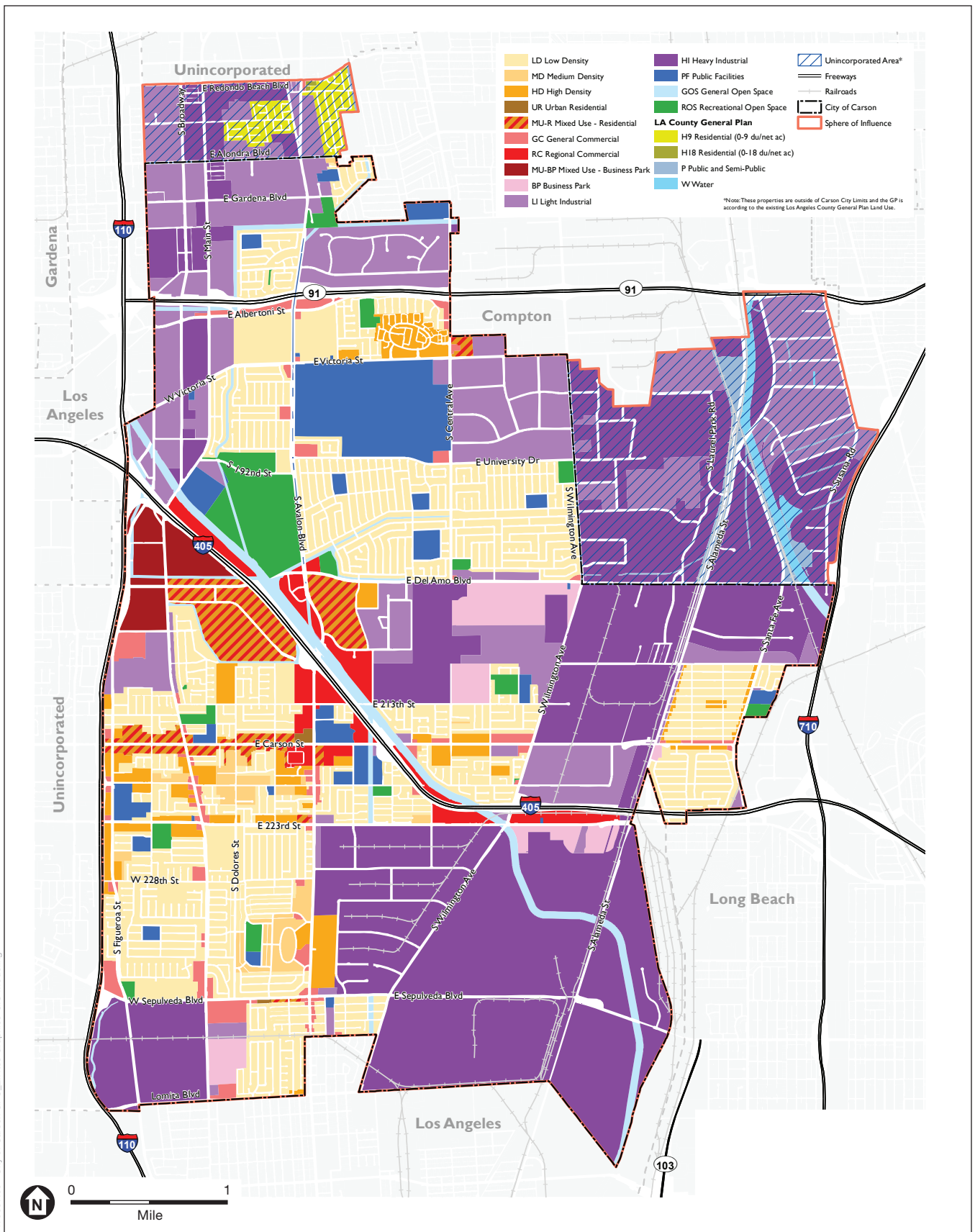
As shown in Table 4-1, the No Project Alternative is projected to result in approximately 18,953 more residents, 5,223 new housing units, and 18,140 new jobs in Carson by 2040. The No Project Alternative is depicted in **Figure 4-1, Alternative 1 – Existing General Plan**.

4.4.2 Alternative 2 – Corridors Alternative

The Corridors Alternative clusters new development around major thoroughfares throughout the city, with an increased focus on corridors with the greatest development opportunities. The overall scale and density of development would vary somewhat throughout the city; however, overall, the density of development would be lower than in the Core or Centers Alternatives and would be more evenly spread throughout the city. Generally, mixed-use development would occur along major streets, with supporting retail, housing, office, and employment uses around the periphery of the mixed-use areas. Main Street, Figueroa Street, and Broadway would be revitalized from nearly the southern border to the northern border of Carson. The Carson Street redevelopment would be extended from the city's western border to Wilmington Avenue, with some additional commercial redevelopment envisioned along Carson Street in the Lincoln Village neighborhood. Additional development would occur along Alameda Street, Sepulveda Boulevard, Del Amo Boulevard, and Avalon Boulevard.

While this alternative concentrates on development along major corridors, other large sites throughout the city would support surrounding neighborhoods. The Shell site would be redeveloped as a new, state-of-the-art R&D campus, bringing more jobs to Carson. A new street grid and linear park in this area would foster connectivity to industrial flex across the street along Del Amo Boulevard and adjacent existing single-family neighborhoods. R&D and industrial flex uses would be increased along Broadway in the northern portion of the city and sphere of influence (SOI). This higher-density, modern industrial area can help to revitalize the low-density, old industrial buildings currently located in this area and provide a more prominent gateway to the city. Both of these R&D areas are in close proximity to California State University, Dominguez Hills, and could help to provide jobs for students. In this alternative, the Victoria Golf Course would be redeveloped as a recreational/open space area and South Bay Pavilion would provide a location for additional housing.

As shown in Table 4-1, the Corridors Alternative is projected to result in approximately 34,106 more residents, 9,880 new housing units, and 19,222 new jobs in Carson by 2040. The Corridors Alternative is depicted in **Figure 4-2, Alternative 2 – Corridors**.

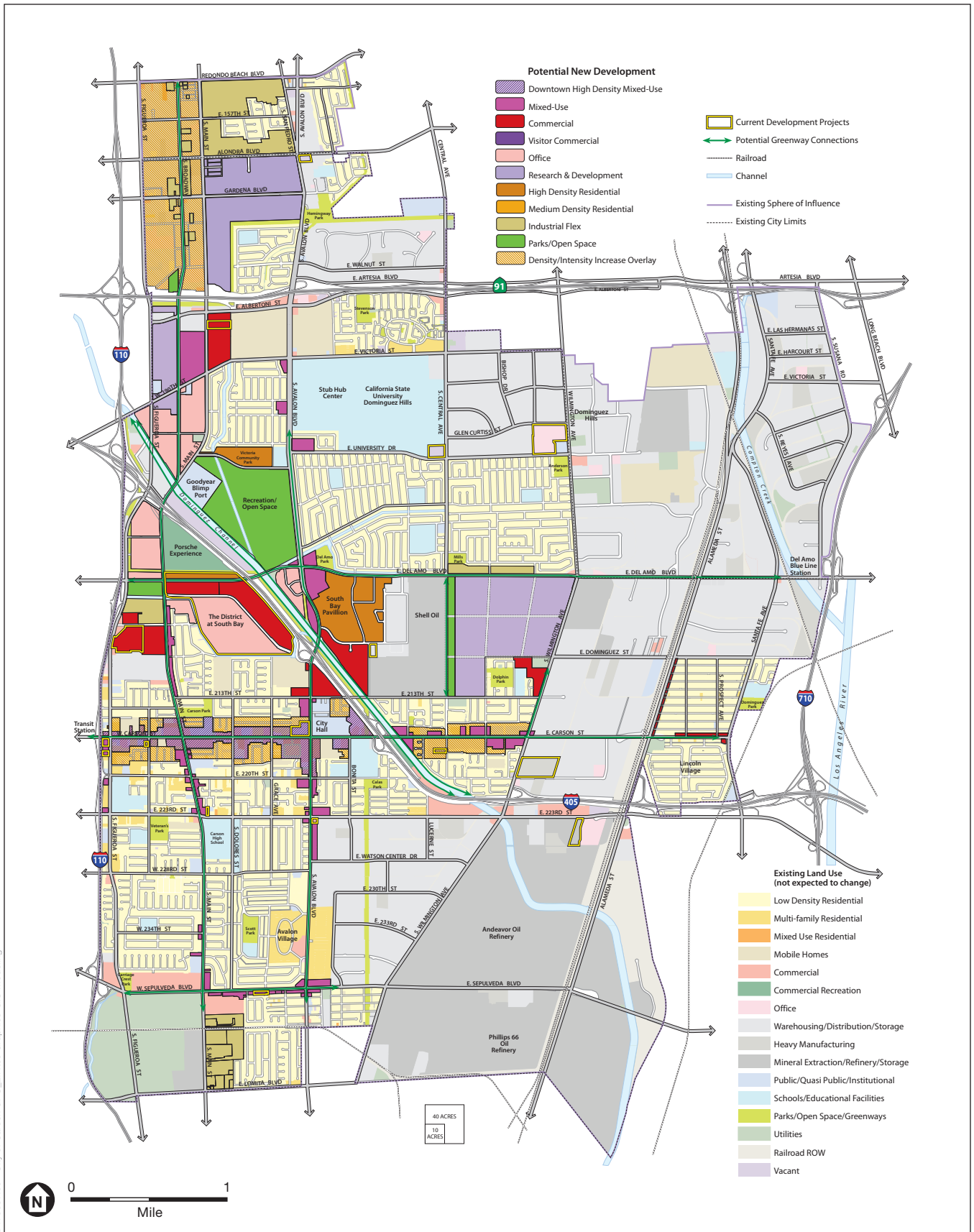


SOURCE: City of Carson, 2017; Los Angeles County GIS Data Portal, 2017; Dyett & Bhatia, 2021

Carson General Plan Update

Figure 4-1
Alternative 1 – Existing General Plan





SOURCE: City of Carson, 2017; Los Angeles County GIS Data Portal, 2017; Dyett & Bhatia, 2021

Carson General Plan Update
Figure 4-2
 Alternative 2 – Corridors



4.5 Analysis Format

In accordance with State CEQA Guidelines Section 15126.6(d), each alternative is evaluated in sufficient detail to determine whether the overall environmental impacts would be less than, similar to, or greater than the corresponding impacts of the Project. Furthermore, each alternative is evaluated to determine whether the project objectives would be substantially attained by the alternative. The evaluation of each of the alternatives includes the following components:

- A description of the alternative.
- An assessment of the impacts of the alternative for each environmental issue area evaluated in the EIR.
- An analysis of how the impacts of the alternative for each environmental issue area compares to the impacts of the Project. Where the impact of the alternative would be clearly less than the impact of the Project, the comparative impact is said to be “less.” Where the alternative’s net impact would clearly be more than the Project, the comparative impact is said to be “greater.” Where the impacts of the alternative and Project would be roughly equivalent, the comparative impact is said to be “similar”.
- The comparative analysis of the impacts is followed by a general discussion of the extent to which the project objectives could be attained by the alternative.
- At the end of this chapter, a table presenting a comparison of impacts between each of the alternatives and the Project is provided, and pursuant to State CEQA Guidelines Section 15126.6(e)(2), an “Environmentally Superior Alternative” is identified.

4.6 Impact Analysis of the Alternatives

4.6.1 Alternative 1 – No Project Alternative

Environmental Impacts

Aesthetics

Scenic Vistas

As discussed in Section 3.1, *Aesthetics*, of this Draft EIR, the Project would not have a substantial adverse effect on a scenic vista as land use designations under the proposed General Plan update focus development toward portions of the Planning Area that are already developed, and thus would relieve pressure to develop in open space and natural areas. In addition, the Project includes several policies that would regulate scenic quality and resources. For these reasons, this impact would be less than significant.

Development under Alternative 1 would also be directed toward portions of the Planning Area that are already developed, and thus would relieve pressure to develop in open space and natural areas. In addition, the existing General Plan includes several policies that also regulate scenic quality and resources. Therefore, the impact with respect to scenic vistas would remain less than significant, similar to the Project, although the severity of this impact would be greater as policies contained in the existing General Plan would not regulate scenic quality and resources to the same degree as the policies contained in the proposed General Plan update.

Scenic Resources

As discussed in Section 3.1, *Aesthetics*, of this Draft EIR, the Project would not substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings, within a state scenic highway as there are no adopted or eligible state scenic highways located in Carson. As a result, no impact would occur.

Development allowed under Alternative 1 would also not damage scenic resources within a State scenic highway for the same reason as the Project. Therefore, no impact would occur with respect to scenic resources within a state scenic highway, similar to the Project, and the severity of this impact would be similar.

Consistency with Applicable Zoning and Regulations Governing Scenic Quality

As discussed in Section 3.1, *Aesthetics*, of this Draft EIR, the Project would not result in development that would conflict with applicable zoning and other regulations governing scenic quality as future development in the city would adhere to Carson Municipal Code provisions relating to development review and subdivision design and proposed General Plan policies that are intended to complement and further these provisions. With respect to the SOI, future development would adhere to applicable zoning and other regulations governing scenic quality, including the Los Angeles County General Plan and Code of Ordinances. For these reasons, this impact would be less than significant.

Development that would occur under Alternative 1 would also adhere to applicable zoning and other regulations governing scenic quality in urbanized areas, including the Los Angeles County General Plan and Code of Ordinances and Carson Municipal Code Section 9126.9. In addition, the existing General Plan includes several policies that also regulate scenic quality and resources. Therefore, the impact with respect to consistency with applicable zoning and other regulations governing scenic quality would remain less than significant, similar to the Project, although the severity of this impact would be greater as policies contained in the existing General Plan would not regulate scenic quality and resources to the same degree as the policies contained in the proposed General Plan update.

Light and Glare

As discussed in Section 3.1, *Aesthetics*, of this Draft EIR, the Project would not create a new source of substantial light or glare that would adversely affect day or nighttime views in the area as future development would be required to comply with provisions within the Carson Municipal Code that would limit light and glare from new non-residential and residential development. In addition, the Project includes a policy that requires that a buffer be placed between industrial uses and existing or permitted residential, parks, schools or other sensitive uses. For these reasons, this impact would be less than significant.

Development allowed under Alternative 1 would also be required to comply with provisions within the Carson Municipal Code that would limit light and glare from new non-residential and residential development. In addition, the existing General Plan includes a policy that requires that a buffer be placed between industrial uses and residential uses. Therefore, the impact with respect

to light and glare would remain less than significant, similar to the Project, and the severity of this impact would be similar.

Air Quality

Air Quality Plan

As discussed in Section 3.2, *Air Quality*, of this Draft EIR, the Project would not conflict with or obstruct implementation of the applicable air quality plan during construction and operation as individual projects would be required to follow existing state and local rules and regulations to minimize short-term and long-term emissions, and thus would be consistent with and meet or exceed the requirements for control strategies found in the applicable air quality plan. In addition, as the applicable air quality plan is based on growth projections derived from the general plans of local jurisdictions with the air basin, as long as future growth in the city is consistent with the proposed General Plan update, it would not conflict with the applicable air quality plan. For these reasons, this impact would be less than significant.

The construction and operation of individual development projects allowed under Alternative 1 would also be required to follow existing state and local rules and regulations to minimize short-term and long-term emissions. In addition, the growth projections contained in Alternative 1 were included in the latest adopted air quality plan, and thus, as long as future growth in the city is consistent with the existing General Plan, it would not conflict with the applicable air quality plan. Therefore, the impact with respect to a conflict with the applicable air quality plan during construction and operation would remain less than significant, similar to the Project, and the severity of this impact would be similar.

Criteria Pollutants

As discussed in Section 3.2, *Air Quality*, of this Draft EIR, the Project could result in a cumulatively considerable net increase of criteria pollutants for which the project region is non-attainment as the construction and operation of individual future projects would generate emissions of criteria pollutants that could exceed regional significance thresholds. Even with the implementation of project specific mitigation measures (MM AQ-1 and MM AQ-5), this impact would not be reduced to a less-than-significant level. As a result, this impact would be significant and unavoidable.

It is also possible that Alternative 1 could result in a cumulatively considerable net increase of criteria pollutants for which the project region is non-attainment for the same reason as the Project. The EIR prepared for the existing General Plan did not include any mitigation measures to reduce construction period and operational emissions. However, future development under Alternative 1 would be required by South Coast Air Quality Management District (SCAQMD) rules to implement similar mitigation as the Project to reduce construction phase and operational emissions. Therefore, this impact would also remain significant and unavoidable, similar to the Project, although the severity of this impact would be less as less growth would occur under Alternative 1 compared to the Project, and thus less traffic and VMT would be generated, which would result in fewer emissions of criteria pollutants from motor vehicles.

Substantial Pollutant Concentrations

As discussed in Section 3.2, *Air Quality*, of this Draft EIR, the Project could expose sensitive receptors to substantial pollutant concentrations as the construction and operation of individual future projects would generate emissions of nitrogen oxides (NO_x), carbon monoxide (CO), Particulate Matter 10 micrometers and smaller (PM₁₀), and Particulate Matter 2.5 micrometers and smaller (PM_{2.5}) that could exceed localized significance thresholds (LST) established by the SCAQMD. In addition, the construction and operation of individual future projects could expose nearby sensitive receptors to levels of toxic air contaminants that could result in a potential increase in cancer, acute, and/or chronic risk. Even with the implementation of project specific mitigation measures (MM AQ-6 and MM AQ-7), this impact would not be reduced to a less-than-significant level. As a result, this impact would be significant and unavoidable.

Alternative 1 could also expose sensitive receptors to substantial pollutant concentrations during construction and operation for the same reasons as the Project. The EIR prepared for the existing General Plan did not include any mitigation measures to require the evaluation of LST air quality and health risk impacts. However, future development in the city would be required by SCAQMD rules to implement similar mitigation as the Project to reduce LST air quality and health risk impacts. Therefore, this impact would also remain significant and unavoidable, similar to the Project, and the severity of this impact would be similar.

Odors

As discussed in Section 3.2, *Air Quality*, of this Draft EIR, the Project could result in odors affecting a substantial number of people during both construction and operation as it is possible that some future development allowed under the proposed General Plan update could be large enough in scale and/or intensity such that substantial odors are generated. Therefore, project-related construction activities could result in a significant and unavoidable impact with respect for odors.

Development permitted under Alternative 1 could also result in odors affecting a substantial number of people during both construction and operation for the same reason as the Project. As a result, project-related construction and operational activities could also result in a significant and unavoidable impact with respect for odors, similar to the Project, and the severity of this impact would be similar.

Biological Resources

Special-Status Species

As discussed in Section 3.3, *Biological Resources*, of this Draft EIR, the Project could have a substantial adverse effect on special-status plant and wildlife species that occur within the Planning Area. However, with adherence to proposed General Plan policies related to the protection of biological resources, compliance with all applicable laws, regulations, and ordinances related to the protection of special-status plant and wildlife species, and implementation of project-specific mitigation measures (MM BIO-1 through MM BIO-9), this impact would be reduced to a less-than-significant level.

Development allowed under Alternative 1 could also have a substantial adverse effect on special-status plant and wildlife species that occur within the Planning Area. The existing General Plan

does not include policies related to the protection of biological resources, and the EIR prepared for the existing General Plan did not include any project-specific mitigation measures that protect special-status plant and wildlife species. However, development allowed under the existing General Plan would still be required to comply with existing regulations related to the protection of biological resources. Therefore, the impact to special-status plant and wildlife species under Alternative 1 is expected to be reduced to a less-than-significant level, similar to the Project, although, the severity of this impact would be greater as growth under the existing General Plan would not adhere to policies contained in the proposed General Plan update.

Riparian Habitat or Sensitive Natural Habitat

As discussed in Section 3.3, *Biological Resources*, of this Draft EIR, the Project could have a substantial adverse effect on riparian habitat or other sensitive natural communities that occur within the Planning Area. However, with adherence to proposed General Plan policies related to the protection of biological resources, compliance with all applicable laws, regulations, and ordinances related to the protection of riparian habitat or other sensitive natural communities, and with the implementation of project-specific mitigation (MM BIO-10 and MM BIO-11), this impact would be reduced to a less-than-significant level.

Development allowed under Alternative 1 could also have a substantial adverse effect on riparian habitat or other sensitive natural communities that occur within the Planning Area. As discussed above, the existing General Plan does not include policies related to the protection of biological resources, and the EIR prepared for the existing General Plan did not include any project-specific mitigation measures that protect riparian habitat or other sensitive natural communities. However, development allowed under the existing General Plan would still be required to comply with the existing regulations related to the protection of biological resources. Therefore, the impact to riparian habitat or other sensitive natural communities under Alternative 1 is expected to be reduced to a less-than-significant level, similar to the Project, although the severity of this impact would be greater as growth under the existing General Plan would not adhere to policies contained in the proposed General Plan update.

State or Federally Protected Wetlands

As discussed in Section 3.3, *Biological Resources*, of this Draft EIR, the Project would not have a substantial adverse effect on state or federally protected wetlands as wetlands in the city are either deed-restricted or under the control of other governmental entities (e.g., Los Angeles County Sanitation Districts). As a result, no impact would occur.

Development allowed under Alternative 1 would also not have a substantial adverse effect on state or federally protected wetlands for the same reason as the Project. Therefore, no impact would occur with respect to state or federally protected wetlands, similar to the Project, and the severity of this impact would be similar.

Wildlife Corridors or Wildlife Nursery Sites

As discussed in Section 3.3, *Biological Resources*, of this Draft EIR, the Project could 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. However, with adherence to proposed General Plan policies related to the protection of biological resources, compliance with all applicable laws, regulations, and ordinances related to the protection of wildlife corridors or wildlife nursery sites, and implementation of project-specific mitigation (MM BIO-5, MM BIO-10 and MM BIO-11), this impact would be reduced to a less-than-significant level.

Development allowed under Alternative 1 could also 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. As discussed above, the existing General Plan does not include policies related to the protection of biological resources, and the EIR prepared for the existing General Plan did not include any project-specific mitigation measures that protect wildlife corridors or wildlife nursery sites. However, development allowed under the existing General Plan would still be required to comply with existing regulations related to the protection of wildlife corridors or wildlife nursery sites. Therefore, the impact to wildlife corridors or wildlife nursery sites under Alternative 1 is expected to be reduced to a less-than-significant level, similar to the Project, although the severity of this impact would be greater as growth under the existing General Plan would not adhere to policies contained in the proposed General Plan update.

Conflict with Tree Preservation Policy or Ordinance

As discussed in Section 3.3, *Biological Resources*, of this Draft EIR, the Project would not conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance, as future development would be subject to the City's and County's tree preservation ordinances. As a result, no impact would occur.

Development allowed under Alternative 1 would also not conflict with a tree preservation policy or ordinance for the same reason as the Project. Therefore, no impact would occur with respect to a conflict with a tree preservation policy or ordinance, similar to the Project, and the severity this impact would be similar.

Conflict with Adopted Habitat Conservation Plan or Natural Community Conservation Plan

As discussed in Section 3.3, *Biological Resources*, of this Draft EIR, the Project would not conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan, as there are no such plans adopted for the Planning Area. As a result, no impact would occur.

Development allowed under Alternative 1 would also not conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan for the same reason as the Project. Therefore, no impact would occur with respect to such plans, similar to the Project, and the severity of this impact would be similar.

Cultural Resources

Historic Resources

As discussed in Section 3.4, *Cultural Resources*, of this Draft EIR, the Project could cause a substantial adverse change in the significance of a historical resource pursuant to §15064.5. Even with adherence to proposed General Plan policies related to the protection of cultural resources and implementation of MM CUL-1, this impact would not be reduced to a less-than-significant level. As a result, this impact would be significant and unavoidable.

Development allowed under Alternative 1 could also cause a substantial adverse change in the significance of a historical resource pursuant to §15064. The existing General Plan also includes policies related to the protection of cultural resources and the EIR prepared for the existing General Plan also included a mitigation measure requiring the preparation of site-specific historic resources assessments. However, this impact would also remain significant and unavoidable for the same reason listed above, similar to the Project, although the severity of this impact would be less as less growth would occur under Alternative 1, and thus there would be less potential to negatively affect historic resources.

Archaeological Resource

As discussed in Section 3.4, *Cultural Resources*, of this Draft EIR, the Project could cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5. However, with the implementation of MM CUL-2, this impact would be reduced to a less-than-significant level.

Development allowed under Alternative 1 could also cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064. The EIR prepared for the existing General Plan also included a mitigation measure requiring the preparation of site-specific archaeological resources assessments. Therefore, the impact to archaeological resources is expected to be reduced to a less-than-significant level, similar to the Project, although the severity of this impact would be less as less growth would occur under Alternative 1, and thus there would be less potential to negatively affect archaeological resources.

Human Remains

As discussed in Section 3.4, *Cultural Resources*, of this Draft EIR, the Project could disturb human remains, including those interred outside of formal cemeteries. However, as future development under the proposed General Plan update would adhere to existing state regulations governing the discovery of human remains, the impact with respect to human remains would be less than significant.

Development allowed under Alternative 1 would also adhere to existing state regulations governing the discovery of human remains. Therefore, the impact with respect to human remains would be less than significant, similar to the Project, although the severity of this impact would be less as less growth would occur under Alternative 1, and thus there would be less potential to negatively affect human remains.

Energy

Wasteful, Inefficient, or Unnecessary Consumption of Energy Resources

As discussed in Section 3.5, *Energy*, of this Draft EIR, the Project would not result in a potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources for several reasons. During the construction, electricity use would be short-term, limited to working hours, and used only for necessary construction-related activities. Furthermore, the use of natural gas during construction would be of limited amounts and on a temporary basis and would specifically be used to replace or offset diesel-fueled equipment. Finally, fuel-efficient construction equipment would be utilized and construction equipment and vehicles would also be required to comply with anti-idling regulations. With respect to operation, all new development under the proposed General Plan update would comply with the applicable provisions of Title 24 and the California Green Building Standards Code (CALGreen) Code. In addition, the location, design, and land uses of the growth anticipated with adoption of the proposed General Plan update would implement land use and transportation strategies aimed at reducing vehicle trips, and thus would reduce the consumption of fuel. For these reasons, this impact would be less than significant.

Alternative 1 would also not result in a potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources during construction for the same reasons as the Project. As a result, the impact with respect to the wasteful, inefficient, or unnecessary consumption of energy resources during construction would remain less than significant, similar to the Project, and the severity of this impact would be similar.

With respect to operation, Alternative 1 would not implement land use and transportation strategies aimed at reducing vehicle trips to the same degree as the Project. In addition, growth under the existing General Plan would also not implement applicable climate change scoping plan GHG reduction strategies, which have co-benefits of reducing building energy and transportation fuel demand, to the same degree as the Project, as the existing General Plan was prepared and adopted before many of these strategies were adopted. While it is reasonable to expect the rate of energy and fuel demand from future development anticipated by the existing General Plan would decline over time due to regulatory initiatives and technical innovations, it would not decline at the same rate as the Project given that Alternative 1 would not implement land use, transportation, and energy-related GHG reduction strategies to the same degree as the Project. Therefore, the impact with respect to the wasteful, inefficient, or unnecessary consumption of energy resources during operation would remain less than significant, similar to the Project, but the severity of this impact would be greater compared to the Project.

Conflict with State or Local Renewable Energy Plan

As discussed in Section 3.5, *Energy*, of this Draft EIR, construction of development permitted by the Project would not conflict with or obstruct a state or local plan for renewable energy or energy efficiency as individual projects would utilize construction contractors who must demonstrate compliance with applicable regulations. In addition, truck fleet operators must upgrade their fleets with vehicles that meet adopted fuel-efficiency standards for medium- and heavy-duty trucks. For these reasons, this impact would be less than significant. With respect to operation, individual projects under the Project would be designed in a manner that is consistent

with relevant energy conservation plans created to encourage development that results in the efficient use of energy resources. In addition, the proposed General Plan update incorporates the policies for energy efficiency and renewable energy that are found in the City's Climate Action Plan (CAP). For these reasons, this impact would be less than significant.

Individual projects under Alternative 1 would also not conflict with or obstruct a state or local plan for renewable energy or energy efficiency for the same reasons as the Project. However, Alternative 1 does not incorporate policies for energy efficiency and renewable energy that are found in the City's CAP. Therefore, while the impact with respect to a conflict with a state or local plan for renewable energy or energy efficiency during construction and operation would remain less than significant, similar to the Project, the severity of this impact would be greater as policies for energy efficiency and renewable energy that are found in the City's CAP would not be implemented.

Geology and Soils

Geologic Hazards

As discussed in Section 3.6, *Geology and Soils*, of this Draft EIR, the Project would not directly or indirectly cause substantial adverse effects involving the risk of geologic hazards as the potential for seismic hazards due to fault rupture, ground shaking, and seismically induced landslides in Carson is relatively low due to the limited presence of known faults and absence of landslide hazard areas in the Planning Area. However, a significant portion of Carson is subject to liquefaction. All future development allowed under the proposed General Plan update would be required to prepare a geotechnical investigation report as part of the environmental and building permit process, and follow policies listed in the Project, which require that projects adhere to state and local regulations, such as California Building Code (CBC), to address seismic hazards. As a result, this impact would be less than significant.

As development allowed under Alternative 1 would also occur within the Planning Area, it would also not directly or indirectly cause substantial adverse effects involving geologic hazards, such as fault rupture, strong seismic ground shaking, and landslides. With respect to seismic-related ground failure, including liquefaction, all future development under the existing General Plan would also be required to prepare a geotechnical investigation report as part of the environmental and building permit process. Finally, as required by mitigation listed in the EIR prepared for the existing General Plan, development allowed under Alternative 1 would also be required to adhere to state and local regulations, such as the CBC. For these reasons, the impact with respect to geologic hazards would remain less than significant, similar to the Project, and the severity of this impact would be similar.

Soil Erosion or Loss of Topsoil

As discussed in Section 3.6, *Geology and Soils*, of this Draft EIR, the Project would not result in substantial soil erosion or the loss of topsoil as the proposed General Plan update includes policies that require the use of best management practices (BMPs) to control soil erosion during and after ground-disturbing activities and the preparation of site-specific geotechnical investigations for projects requiring grading permits. In addition, future development that disturbs more than one acre would be subject to compliance with a National Pollution Discharge

Elimination System (NPDES) permit, which would include implementation of BMPs and preparation of a storm water pollution prevention plan (SWPPP), which would include erosion prevention measures that have proven effective in limiting soil erosion and loss of topsoil. As a result, this impact would be less than significant.

Development allowed under Alternative 1 would also be subject to compliance with a NPDES permit, including the preparation of a SWPPP, and would implement mitigation contained in the existing General Plan, which requires that grading plans for all development projects include an approved drainage and erosion control plan. Therefore, the impact with respect to soil erosion or loss of topsoil would be less than significant, similar to the Project, and the severity of the impact would be similar.

Unstable and Expansive Soils

As discussed in Section 3.6, *Geology and Soils*, of this Draft EIR, the Project would not have a significant impact with respect to unstable soils, such as on- or off-site landslide, lateral spreading, subsidence, liquefaction, or collapse, and expansive soils as the proposed General Plan update includes policies that address risk of exposure to geologic hazards by mandating site-specific geotechnical investigations and mitigation prior to development. As a result, this impact would be less than significant.

Mitigation contained in the EIR for the existing General Plan also mandates site-specific geotechnical investigations and mitigation prior to development. Therefore, the impact with respect to unstable and expansive soils would remain less than significant, similar to the Project, and the severity of this impact would be similar.

Paleontological Resources

As discussed in Section 3.6, *Geology and Soils*, of this Draft EIR, the Project would not directly or indirectly destroy a unique paleontological resource or site or unique geologic feature as policies in the proposed General Plan update require the preparation of site-specific paleontological studies prior to development and paleontological resources monitoring for any project that has a high potential for encountering subsurface paleontological resources. As a result, this impact would be less than significant.

Mitigation contained in the EIR for the existing General Plan also requires that an evaluation of paleontological resources be performed prior to development. Therefore, the impact with respect to paleontological resources would remain less than significant, similar to the Project, and the severity of this impact would be similar.

Greenhouse Gas Emissions

Emissions

As discussed in Section 3.7, *Greenhouse Gas Emissions*, of this Draft EIR, the Project would not generate greenhouse gas (GHG) emissions, either directly or indirectly, that may have a significant impact on the environment during construction as each future project developed under the proposed General Plan update would be required to comply with applicable federal, state, and local regulations that would reduce the amount of GHG emissions generated by construction

equipment and activities. With respect to operation, the Project would not generate GHG emissions, either directly or indirectly, that may have a significant impact on the environment as the net change in operational emissions from existing conditions (2016) compared to existing plus buildout of new development under the proposed General Plan update at 2040 buildout would be negative compared to existing (2016) conditions. For these reasons, this impact would be less than significant.

Alternative 1 would also not generate GHG emissions, either directly or indirectly, that may have a significant impact on the environment during construction for the same reasons as the Project. Therefore, the impact with respect to the generation of GHG emissions during construction would remain less than significant, similar to the Project, and the severity of this impact would be similar.

With respect to operation, as less growth would occur under the existing General Plan, less traffic would be generated and less building space would be constructed, and thus fewer GHG emissions would be generated from motor vehicles and the heating and cooling of buildings. As the net change in operational emissions from existing conditions (2016) compared to buildout of the Project in 2040 would be negative compared to existing (2016) conditions, the net change in operational emissions from existing conditions (2016) compared to buildout of Alternative 1 in 2040 would also be negative compared to existing (2016) conditions. Therefore, the impact with respect to the generation of GHG emissions during operation would remain less than significant, similar to the Project, although the severity of this impact would be less as less traffic would be generated under Alternative 1, thus resulting in fewer GHG emissions compared to the Project.

Conflict with Greenhouse Gas Reduction Plans, Policies, and Regulations

As discussed in Section 3.7, *Greenhouse Gas Emissions*, of this Draft EIR, the Project would not conflict with any applicable plan, policy or regulation adopted for the purpose of reducing the emissions of GHGs as development permitted under the proposed General Plan update would be consistent with applicable climate change scoping plan GHG reduction strategies. In addition, it is reasonable to expect the GHG emissions from future development anticipated by the Project would decline over time due to regulatory initiatives and technical innovations, and thus development permitted by the proposed General Plan update would not conflict with or interfere with the ability of the state to achieve its GHG reduction goal of 80 percent below 1990 levels by 2050 as stated in Executive Order S-3-05. Next, the Project would be consistent with applicable 2020-2045 Southern California Association of Governments (SCAG) Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS) (Connect SoCal) actions and strategies, which work to reduce GHG emissions generated by the transportation sector by aligning transportation, land use, and housing strategies. Finally, the development permitted by the proposed General Plan update be required to be consistent with the City's CAP. For these reasons, this impact would be less than significant.

Development permitted under Alternative 1 would not implement applicable climate change scoping plan GHG reduction strategies to the same degree as the Project, as the existing General Plan was prepared and adopted before many of these strategies were adopted. However, it is reasonable to expect the GHG emissions from future development anticipated by the existing General Plan would decline over time due to regulatory initiatives and technical innovations. In

addition, it is also reasonable to expect the future development under Alternative 1 would be designed to be consistent with 2020–2045 SCAG RTP/SCS (Connect SoCal) actions and strategies and the City’s CAP. Therefore, while the impact with respect to a conflict with respect to GHG reduction plans, policies, and regulations would likely remain less than significant, similar to the Project, the severity of this impact would be greater as growth under the existing General Plan would not implement applicable climate change scoping plan GHG reduction strategies to the same degree as the Project.

Hazards and Hazardous Materials

Routine Use, Transportation, Disposal, or Accidental Release of Hazardous Materials

As discussed in Section 3.8, *Hazards and Hazardous Materials*, of this Draft EIR, the Project would not create a significant hazard to the public or the environment through the routine use, transport, disposal, or accidental release of hazardous materials as the construction and operation of future development allowed under the proposed General Plan update would adhere to applicable federal, state, and local regulations governing the transportation, use, handling, and disposal of hazardous materials. As a result, this impact would be less than significant.

Development allowed under Alternative 1 would also not create a significant hazard to the public or the environment through the routine use, transport, disposal, or accidental release of hazardous materials during construction and operation for the same reason as the Project. Therefore, the impact with respect to the transportation, use, handling, and disposal of hazardous materials would remain less than significant, similar to the Project, and the severity of this impact would be similar.

Emit Hazardous Emissions, Handle Hazardous Materials, etc., near a School

As discussed in Section 3.8, *Hazards and Hazardous Materials*, of this Draft EIR, the Project would not result in hazardous emissions or the handling of hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school site as existing and future development under the proposed General Plan update in the vicinity of an existing or proposed school site would adhere to applicable federal, state, and local regulations governing the transportation, use, handling, and disposal of hazardous materials. As a result, this impact would be less than significant.

Development allowed under Alternative 1 would also not result in hazardous emissions or the handling of hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school site for the same reason as the Project. Therefore, the impact with respect to the transportation, use, handling, and disposal of hazardous materials would remain less than significant, similar to the Project, and the severity of this impact would be similar.

Hazardous Materials Sites

As discussed in Section 3.8, *Hazards and Hazardous Materials*, of this Draft EIR, the Project would not create a significant hazard to the public or environment from a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 as future development under the proposed General Plan update would adhere to applicable federal, state, and local regulations that provide procedures for the testing, handling, disposal, and remediation of hazardous materials. As a result, this impact would be less than significant.

Development allowed under Alternative 1 would also not create a significant hazard to the public or environment from a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 for the same reason as the Project. Therefore, the impact with respect to creating a significant hazard to the public or environment from a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 would remain less than significant, similar to the Project, and the severity of this impact would be similar.

Airport Land Use Plan Conflicts

As discussed in Section 3.8, *Hazards and Hazardous Materials*, of this Draft EIR, the Project would not be located within an airport land use plan or, where such plan has not been adopted, within two miles of a public airport or public use airport as future development under the proposed General Plan update would not fall within the noise contours or airport influence area of the Compton/Woodley Airport, which is the only airport located within two miles of the city limits. As a result, this impact would be less than significant.

Development allowed under Alternative 1 would also not be located within an airport land use plan or, where such plan has not been adopted, within two miles of a public airport or public use airport for the same reason as the Project. Therefore, the impact with respect to airport land use plan conflicts would remain less than significant, similar to the Project, and the severity of this impact would be similar.

Emergency Response Plan

As discussed in Section 3.8, *Hazards and Hazardous Materials*, of this Draft EIR, the Project would not impair implementation of or interfere with an adopted emergency response plan or emergency evacuation plan as future development under the proposed General Plan update would be required to be consistent with policies contained in the Project that require the City to ensure adequate emergency access. As a result, this impact would be less than significant.

The existing General Plan does not include specific policies to ensure adequate emergency access. However, development allowed under Alternative 1 would be required by existing regulations to ensure emergency access to each project site. As a result, the impact with respect to the impairment or interference with an adopted emergency response plan or emergency evacuation plan would remain less than significant, similar to the Project, and the severity of this impact would be similar.

Wildland Fire Hazards

As discussed in Section 3.8, *Hazards and Hazardous Materials*, of this Draft EIR, the Project would not expose people or structures, either directly or indirectly, to a significant risk of loss, injury, or death involving wildland fires as the city is not located in a Very Fire Hazard Severity Zone and the construction of future development under the proposed General Plan update would comply with all applicable fire protection and prevention regulations specified in the California Fire Code, Hazardous Materials Transportation regulations, and California Division of Occupational Safety and Health (Cal/OSHA) regulations. As a result, no impact would occur.

Development allowed under Alternative 1 would also not expose people or structures, either directly or indirectly, to a significant risk of loss, injury, or death involving wildland fires for the same reasons as the Project. Therefore, no impact would occur with respect to wildfire hazards, similar to the Project, and the severity of this impact would be similar.

Hydrology and Water Quality

Water Quality

As discussed in Section 3.9, *Hydrology and Water Quality*, of the Draft EIR, the Project would not violate any water quality standards or waste discharge requirements or otherwise substantially degrade water quality as future development under the proposed General Plan update would adhere to applicable federal, state, and local regulations pertaining to water quality. In addition, the Project contains policies that promote improved water quality in the city and continued compliance with federal, state, and local water quality regulations, which would ensure that water quality is protected to the maximum extent practicable. As a result, this impact would be less than significant.

Development allowed under Alternative 1 would also adhere to applicable federal, state, and local regulations pertain to water quality and be consistent with existing General Plan policies that promote improved water quality. Therefore, the impact with respect to water quality would remain less than significant, similar to the Project, and the severity of this impact would be similar.

Groundwater

As discussed in Section 3.9, *Hydrology and Water Quality*, of the Draft EIR, the Project would not substantially deplete groundwater supplies or interfere substantially with groundwater recharge as the groundwater basins serving the city are adjudicated, and thus have limits on the amount of groundwater that is pumped for potable use, and the replenishment of groundwater in the city is not reliant on natural recharge or percolation. Therefore, this impact would be less than significant.

Development allowed under Alternative 1 would also not substantially deplete groundwater supplies or interfere substantially with groundwater recharge for the same reasons as the Project. As a result, the impact with respect to groundwater recharge would remain less than significant, similar to the Project, and the severity of this impact would be similar.

Drainage

As discussed in Section 3.9, *Hydrology and Water Quality*, of the Draft EIR, the Project would not substantially alter existing drainage patterns in the city as a majority of development allowed under the proposed General Plan update would occur in areas that are already developed with existing impervious surfaces. In addition, anticipated growth in the city would adhere to existing local regulations governing floodplain management and runoff pollution control, and would comply with the policies contained in the proposed General Plan update that seek to reduce localized flooding and ensure that areas experiencing localized flooding problems are targeted for storm drain improvements. For these reasons, this impact would be less than significant.

Development allowed under Alternative 1 would also occur in areas that are already developed with existing impervious surfaces. In addition, growth that would continue under the current General Plan would also adhere to existing local regulations governing floodplain management

and runoff pollution control and comply with policies in the existing General Plan that govern drainage. Therefore, the impact with respect to drainage would remain less than significant, similar to the Project, and the severity of this impact would be similar.

Inundation

As discussed in Section 3.9, *Hydrology and Water Quality*, of the Draft EIR, the Project would not risk release of pollutants due to project inundation from a flood, tsunami or seiche due to the city's inland location and lack of enclosed water bodies. In addition, anticipated growth in the city would adhere to existing local regulations pertaining to flood control and would implement proposed General Plan policies addressing flooding. As a result, this impact would be less than significant.

As development allowed under Alternative 1 would also occur within the Planning Area, it would also not be subject to inundation from a tsunami or seiche. In addition, growth anticipated under the current General Plan would also adhere to existing local regulations and implement goals and policies in the existing General Plan that pertain to flood control. Therefore, the impact with respect to inundation would remain less than significant, similar to the Project, and the severity of this impact would be similar.

Water Quality Plan or Sustainable Groundwater Management Plan

As discussed in Section 3.9, *Hydrology and Water Quality*, of the Draft EIR, the Project would not conflict with or obstruct implementation of a water quality control plan as anticipated growth in the city would adhere applicable federal, state, and local regulations pertaining to water quality and would implement General Plan policies that protect water quality. In addition, the water basins underlying the city are adjudicated and adjudicated basins are not required to prepare sustainable groundwater management plans. For these reasons, this impact would be less than significant.

Development allowed under Alternative 1 would also adhere applicable federal, state, and local regulations pertaining to water quality and would implement policies in the existing General Plan that protect water quality. In addition, as growth anticipated under the current General Plan would be within the same Planning Area, it would also not conflict with a sustainable groundwater management plan as the basins under the Planning Area are adjudicated. Therefore, the impact with respect to a water quality plan or sustainable groundwater management plan would remain less than significant, similar to the Project, and the severity of this impact would be similar.

Land Use and Planning

Physically Divide a Community

As discussed in Section 3.10, *Land Use and Planning*, of the Draft EIR, the Project would not physically divide an established community as policies in the proposed General Plan update promote improved connectivity and land use consistency within and between existing neighborhoods. As a result, this impact would be less than significant.

Development allowed under Alternative 1 would also not physically divide an established community as the Planning Area is largely built out and future development under the existing General Plan would likely occur on existing lots served with existing infrastructure, and thus development under Alternative 1 would not necessitate new roads or other infrastructure that

would physically divide an established community. Therefore, the impact with respect to physically dividing an established community would remain less than significant, similar to the Project, although the severity of this impact would be greater as policies contained in the proposed General Plan update that improve connectivity and land use consistency within and between existing neighborhoods would not be implemented under Alternative 1.

Consistency with Applicable Land Use Plans

As discussed in Section 3.10, *Land Use and Planning*, of the Draft EIR, the Project would not 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 as proposed General Plan policies would not conflict with current 2004 General Plan policies or existing planning regulations designed to implement the 2004 General Plan and subsequent amendments. In addition, the proposed General Plan update takes into account changes to land use designations within the boundaries of various adopted specific plans in the city. Finally, the Project would not conflict with the region's RTP/SCS (Connect SoCal) as policies within the proposed General Plan update would integrate land use, housing, and transportation planning to achieve regional GHG emission reductions by promoting compact, infill, and mixed-use development. For these reasons, this impact would be less than significant.

Development allowed under Alternative 1 would also not 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 as the current General Plan complies with existing zoning and most regional and local plans; Alternative 1 would not provide sufficient land capacity to fully meet the City's allocation under the 6th cycle of the Regional Housing Needs Assessment (RNHA). All future growth under Alternative 1 must be consistent with the existing General Plan, and thus would be consistent with existing zoning and regional and local plans. In addition, all future growth in the city's SOI must be consistent with the Los Angeles County General Plan and Los Angeles County zoning regulations. For these reasons, the impact with respect to consistency with applicable plans would remain less than significant, similar to the Project, although the severity of this impact would be greater as the existing General Plan does not integrate land use, housing, and transportation planning to the same degree as the proposed General Plan update and thus would not implement the RTP/SCS (Connect SoCal) to the same degree as the Project. In addition, Alternative 1 would not provide sufficient capacity to fully meet the City's 6th cycle RNHA allocation.

Noise and Vibration

Temporary or Permanent Increase in Ambient Noise Levels

As discussed in Section 3.11, *Noise*, of the Draft EIR, construction of future development allowed under the Project would not result in the generation of a substantial temporary increase in ambient noise levels in excess of City standards as individual projects would be required to conduct their own CEQA analysis and implement mitigation in the event that noise generated during construction exceed thresholds. In addition, operation of future development allowed under the Project would not result in a substantial permanent increase in ambient noise levels in the city in excess of City standards as future traffic noise along major roadway segments in the city would

not be discernably different when compared to existing traffic noise levels. Therefore, this impact would be less than significant.

Construction of future development allowed under Alternative 1 would also not result in the generation of a substantial temporary increase in ambient noise levels in excess of City standards for the same reason as the Project. As a result, the impact with respect to construction noise would remain be less than significant, similar to the Project, and the severity of this impact would be similar.

With respect to operation, as less growth would occur under the existing General Plan, less traffic would be generated along streets in the Planning Area, and thus less noise from traffic would be generated. As future traffic noise along major roadway segments in the city from the Project would not be discernably different when compared to existing traffic noise levels, future traffic noise along major roadway segments in the city from Alternative 1 would also not be discernably different when compared to existing traffic noise levels. As a result, the impact with respect to traffic noise would remain less than significant, similar to the Project, although the severity of this impact would be less as less traffic would be generated by Alternative 1, thus resulting in less traffic noise compared to the Project.

Excessive Groundborne Vibration or Groundborne Noise

As discussed in Section 3.11, *Noise*, of the Draft EIR, construction of future development allowed under the Project would not result in the generation of excessive groundborne vibration or groundborne noise as individual projects would be required to conduct their own CEQA analysis and implement mitigation in the event that vibration generated during construction exceed thresholds. In addition, traffic generated by future development allowed under the Project would not result in the generation of excessive groundborne vibration or groundborne noise as vibration from vehicles is temporary and intermittent, and would be well below the thresholds for human annoyance and structural damage. For these reasons, this impact would be less than significant.

Construction of future development allowed under Alternative 1 would not result in the generation of excessive groundborne vibration or groundborne noise. As a result, the impact with respect to construction vibration would remain less than significant, similar to the Project, and the severity of this impact would be similar.

With respect to operation, as less growth would occur under the existing General Plan, less traffic would be generated along streets in the Planning Area, and thus less vibration from traffic would be generated. As vibration from vehicles associated with the Project is temporary and intermittent, and would be well below the thresholds for human annoyance and structural damage, vibration from vehicles associated with the Alternative 1 would also is temporary and intermittent, and would be well below the thresholds for human annoyance and structural damage. Therefore, the impact with respect to traffic vibration would remain less than significant, similar to the Project, although the severity of this impact would be less as less traffic would be generated by Alternative 1, thus resulting in less traffic vibration compared to the Project.

Airport Noise

As discussed in Section 3.11, *Noise*, of the Draft EIR, the Project would not expose people residing or working in the Planning Area to excessive noise levels generated by aircraft as the city is not located within the vicinity of a private airstrip or airport land use plan, and thus is not within the 60 dBA Community Noise Equivalent Level (CNEL) of any airport. Therefore, this impact would be less than significant.

Development allowed under Alternative 1 would also not expose people residing or working in the Planning Area to excessive noise levels generated by aircraft for the same reason as the Project. As a result, the impact with respect to airport noise would remain less than significant, similar to the Project, and the severity of this impact would be similar.

Population and Housing

Induce Unplanned Population Growth

As discussed in Section 3.12, *Population and Housing*, of the Draft EIR, the Project would not induce substantial unplanned population growth in an area, directly nor indirectly, as the proposed General Plan update is a long-range planning effort that was designed to accommodate regional growth requirements for the next 20 years. In addition, proposed General Plan policies seek to provide housing that meets the diverse needs of Carson's growing population while preserving existing neighborhoods, as well as ensuring that public facilities, services, and infrastructure maintain a level of service that supports a high quality of life for all residents. As a result, this impact would be less than significant.

Alternative 1 would result in less population and housing than the Project and a similar amount of jobs growth, due to the alternative's lower densities, intensities, and variety of uses. Enough development capacity remains under the existing General Plan that future growth allowed under Alternative 1 could be accommodated within the existing framework, and thus this future growth would not be substantial. Therefore, the impact with respect to the inducement of unplanned population growth would be less than significant, similar to the Project, although the severity of this impact would be less as all growth under Alternative 1 would be planned.

Construction of New Housing

As discussed in Section 3.12, *Population and Housing*, of the Draft EIR, the Project would not displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere, as proposed General Plan land use designations and policies would increase allowable intensities and residential densities in more areas of the city, thereby increasing capacity for new housing. Additionally, the Housing Element, which was prepared separately and adopted as of February 1, 2022, has been designed to be consistent with the proposed General Plan update and reflects the new land use designations that allow greater residential densities in order to meet the City's Regional Housing Needs Assessment (RHNA) obligation for the 2021-2029 housing element cycle. For these reasons, the impact would be less than significant.

Population growth under the existing General Plan would be less than under the proposed General Plan update. As discussed above, enough development capacity remains under the existing General Plan that future growth allowed under Alternative 1 could be accommodated by the

existing framework. This would likely occur in places where properties could be developed at higher densities under existing zoning (i.e., underutilized parcels). While some redevelopment may occur and cause some displacement, adherence to state and County regulations that address the displacement of residents would mitigate these effects, and it is not expected that such development would impact substantial numbers. Therefore, the impact with respect to the construction of new housing would remain be less than significant, similar to the Project although the severity of this impact would be less as less growth would occur under Alternative 1 compared to the Project.

Public Services

Fire and Police Service

As discussed in Section 3.13, *Public Services*, of the Draft EIR, the Project would not result in substantial adverse physical impacts associated with the provision of new or physically altered fire and police service facilities as future development would be concentrated in areas already well-served by existing fire and police facilities, and if new fire and police facilities are required, the construction of these facilities would have minimal effects on the environment with compliance with existing regulations and proposed General Plan policies. In addition, the proposed General Plan update promotes compact development patterns through infill development, ensuring new development would be located within close proximity to existing fire stations and police station. For these reasons, this impact would be less than significant.

As less growth would occur under Alternative 1 compared to the Project, demand for fire and police service would be less under the existing General Plan than under the proposed General Plan update. In addition, growth under Alternative 1 would be subject to existing City of Carson and County of Los Angeles policies regarding fire safety education, public safety programs, and coordination with the County Fire and Sheriff's departments to minimize calls for fire and police protection services. Therefore, the impact with respect to fire and police services would remain less than significant, similar to the Project, although the severity of this impact would be less as there would be less demand for these services under Alternative 1 compared to the Project.

Schools

As discussed in Section 3.13, *Public Services*, of the Draft EIR, the Project would not result in substantial adverse physical impacts associated with the provision of new or physically altered school facilities as schools in the Planning Area have sufficient facility capacity to meet projected enrollment needs, and if school police facilities are required, the construction of these facilities would have minimal effects on the environment with compliance with existing regulations and proposed General Plan policies. In addition, all new development would pay school impact fees, which fully mitigates the impacts of development on school facilities for purposes of CEQA per State Bill (SB) 50. For these reasons, this impact would be less than significant.

As less growth would occur under Alternative 1 compared to the Project, fewer students would attend local schools under the existing General Plan than under the proposed General Plan update. As a result, existing facilities capacity would still be sufficient. If new school facilities are required, the construction of these facilities would also have minimal effects on the environment with compliance with existing regulations and existing General Plan policies. In addition, all new

development under Alternative 1 would also be required to pay school impact fees. Therefore, the impact with respect to schools would remain less than significant, similar to the Project, although the severity of this impact would be less as there would be less demand for schools under Alternative 1 compared to the Project.

Parks

A comparison of impacts to parks and recreation facilities between the Project and Alternative 1 is provided below under “Recreation.”

Other Public Facilities

As discussed in Section 3.13, *Public Services*, of the Draft EIR, the Project would not result in substantial adverse physical impacts associated with the provision of new or physically altered government facilities, such as community centers and libraries, as the construction of these facilities, if needed, would have minimal effects on the environment with compliance with existing regulations and proposed General Plan policies. As a result, this impact would be less than significant.

As less growth would occur under Alternative 1 compared to the Project, demand for other public facilities, such as community centers and libraries, would be less under the existing General Plan than under the proposed General Plan update. If new public facilities are required, the construction of these facilities would also have minimal effects on the environment with compliance with existing regulations and existing General Plan policies. Therefore, the impact with respect to public facilities would remain less than significant, similar to the Project, although the severity of this impact would be less as there would be less demand for these facilities under Alternative 1 compared to the Project.

Recreation

Deterioration of Existing Recreational Facilities

As discussed in Section 3.14, *Recreation*, of the Draft EIR, the Project would not increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated as the Project would add more than 180 acres of parkland to the City’s inventory, which exceeds the required 84.7 additional acres of parkland that the City would need to meet future demand. In addition, the Project includes provisions to ensure ongoing expansion, investment in, and maintenance of public recreation facilities, thus minimizing substantial physical deterioration of existing or new facilities. Finally, policies in the proposed General Plan update are designed to minimize the environmental impact of park and recreational facility development, including the development of design and site planning standards that consider energy and water efficiency, sustainable design elements, and habitat and cultural resource preservation. For these reasons, this impact would be less than significant.

As less growth would occur under Alternative 1 compared to the Project, the use of existing neighborhood and regional parks or other recreational facilities would be less under the existing General Plan than under the proposed General Plan update. However, the amount of parkland to be added under the existing General Plan would not be enough to meet future demand of 36.0 acres of parkland under Alternative 1. While the existing General Plan does include goals,

policies, and implementation measures to minimize substantial physical deterioration of existing or new facilities, the impact with respect to the deterioration of existing recreational facilities would be significant and unavoidable as no feasible mitigation is available, and thus the severity of this impact would be greater compared to the Project.

Construction or Expansion of Recreational Facilities

As discussed in Section 3.14, *Recreation*, of the Draft EIR, the Project would result in the development of new parks and recreational facilities. However, construction of these facilities would not have an adverse physical effect on the environment as new parks and recreational facilities would be subject to CEQA requirements for environmental assessment. Although compliance would not necessarily guarantee that significant impacts would be avoided or mitigated, it would allow for the identification and consideration of potential impacts and mitigation. In addition, the Project includes policies that are designed to minimize the environmental impact of development of new parks or recreational facilities. For these reasons, this impact would be less than significant.

Growth under Alternative 1 would also result in the development of new parks and recreational facilities. Like the Project, construction of new parks and recreational facilities would also be subject to CEQA requirements for environmental assessment. If the construction or expansion of recreational facilities are required, the construction of these facilities would also have minimal effects on the environment with compliance with existing regulations and existing General Plan policies. Therefore, the impact with respect to the construction or expansion of recreational facilities would remain less than significant, similar to the Project, and the severity of this impact would be similar.

Transportation

Conflict with Adopted Circulation Program, Plan, Ordinance, or Policy

As discussed in Section 3.15, *Transportation*, of the Draft EIR, the Project would not conflict with a program, plan, ordinance or policy addressing the circulation system, including transit, roadway bicycle and pedestrian facilities due to the availability of non-vehicular transportation options for the community. In addition, policies included in the proposed General Plan update would balance the multimodal transportation network by providing alternatives to the automobile, improving transit service connections, and encouraging the use of alternative modes of transportation. As a result, this impact would be less than significant.

Future development under Alternative 1 would also not conflict with a program, plan, ordinance or policy addressing the circulation system as non-vehicular transportation options for the community would also be available under continued growth as permitted by the existing General Plan. In addition, while policies in the existing General Plan do not balance the multimodal transportation network as well as the Project, Alternative 1 does include policies that promote the use of alternative modes of transportation. As a result, the impact with respect to a conflict with an adopted circulation program, plan, ordinance, or policy would remain less than significant, similar to the Project, and the severity of this impact would be similar.

Vehicle Miles Traveled

As discussed in Section 3.15, *Transportation*, of the Draft EIR, the Project would conflict or be inconsistent with CEQA Guidelines Section 15064.3, Subdivision (b) as Total VMT per Service Population associated with growth under the proposed General Plan update would not achieve a 15 percent or more reduction compared to the baseline. Although policies promoting a reduction of VMT per capita are included in the proposed General Plan update, no feasible mitigation is available to reach the 15 percent or more reduction threshold. As a result, this impact would be significant and unavoidable.

As less growth would occur under Alternative 1 compared to the Project, less traffic would be generated along streets in the Planning Area, and thus less VMT would be generated under the existing General Plan. However, this reduction in VMT under Alternative 1 would not likely be enough to achieve a 15 percent or more reduction compared to the baseline. In addition, although the existing General Plan does not include policies that specifically promote a reduction of VMT per capita, it does include policies that aim to reduce vehicle trips. As a result, this impact would remain significant and unavoidable, similar to the Project, although the severity of this impact would be less as less traffic would be generated under Alternative 1 compared to the Project.

Design Hazards

As discussed in Section 3.15, *Transportation*, of the Draft EIR, the Project would not substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment) as access locations for future development would be designed to the City's standards and would provide adequate sight distance. In addition, policies included in the proposed General Plan update that promote bicycle and pedestrian safety would help identify and address potential safety concerns. Therefore, this impact would be less than significant.

Access locations for future development under Alternative 1 would also be designed to the City's standards and would provide adequate sight distance. As a result, the impact with respect to design hazards would remain less than significant, similar to the Project, and the severity of this impact would be similar.

Emergency Access

As discussed in Section 3.15, *Transportation*, of the Draft EIR, the Project would not result in inadequate emergency access as future development would be compliant with the City's design guidelines that incorporate safety and emergency access needs, where applicable. As a result, this impact would be less than significant.

Future development under Alternative 1 would also not result in inadequate emergency access for the same reason as the Project. Therefore, the impact with respect to emergency access would remain less than significant, similar to the Project, and the severity of this impact would be similar.

Tribal Cultural Resources

As discussed in Section 3.16, *Tribal Cultural Resources*, of the Draft EIR, the Project would not cause a substantial adverse change in the significance of a tribal cultural resource as no tribal cultural resources were identified within or adjacent to the Planning Area. However, given the

historic occupation of the area, it is possible that future development within the Planning Area may result in the identification of unrecorded tribal cultural resources. However, future projects would be required to comply with the provisions of SB 18 and Assembly Bill (AB) 52 to incorporate tribal consultation into the CEQA process to ensure that tribal cultural resources are properly identified and that mitigation measures are identified to reduce impacts on these resources. As a result, this impact would be less than significant.

Future development under Alternative 1 would also not cause a substantial adverse change in the significance of a tribal cultural resource for the same reason as the Project. Therefore, the impact with respect to tribal cultural resources would remain less than significant, similar to the Project, and the severity of this impact would be similar.

Utilities and Service Systems

New or Expanded Facilities

As discussed in Section 3.17, *Utilities and Service Systems*, of the Draft EIR, the Project would not require or result in the relocation or construction of new or expanded water and wastewater treatment facilities as all facilities serving the city have sufficient remaining capacity to serve anticipated growth within the Planning Area. In addition, policies included in the proposed General Plan update aim to conserve water by curbing demand and ensuring that the planning water infrastructure is coordinated, thus reducing demand on existing water and wastewater treatment infrastructure. However, the Project could require or result in the relocation or construction of new or expanded stormwater drainage, electric power, natural gas, and telecommunications facilities, and should upgrades to new facilities be required, the construction of those facilities could result in adverse environmental effects, which are considered throughout the technical sections of this Draft EIR. In addition, future facilities would be required to comply with the City's requirements for construction projects, including but not limited to, grading permits and encroachment permits. As a result, this impact would be less than significant.

As less growth would occur under Alternative 1 compared to the Project, less water and wastewater treatment would be required under the existing General Plan. As the water and wastewater treatment facilities serving the city have sufficient remaining capacity to serve anticipated growth within the Planning Area under the Project, sufficient capacity also exists to treat water and wastewater generated by growth anticipated under Alternative 1. In addition, development under Alternative 1 would adhere to existing General Plan policies that would aim to conserve water. Finally, development allowed under Alternative 1 could also require or result in the relocation or construction of new or expanded stormwater drainage, electric power, natural gas, and telecommunications facilities, but not to the same degree as less development would occur under the existing General Plan. Should upgrades to new facilities be required under this alternative, the construction of those facilities could result in adverse environmental effects, which are considered throughout the technical sections of the existing General Plan EIR. In addition, future facilities under the existing General Plan would also be required to comply with the City's requirements for construction projects, including but not limited to, grading permits and encroachment permits. For the reasons, the impact with respect to new or expanded water, wastewater, stormwater drainage, electric power, natural gas, and telecommunications facilities would remain less than significant, similar to the Project, although the severity of this impact

would be less as there would be less demand for these facilities under Alternative 1 compared to the Project.

Water Supply

As discussed in Section 3.17, *Utilities and Service Systems*, of the Draft EIR, sufficient water supplies are available to serve the Project, as well as reasonably foreseeable future development, during normal, dry and multiple dry years as the city's water service providers have indicated that they have reliable supplies to meet anticipated demand under each of these scenarios. In addition, each individual development proposal would be required to address water supply as part of the CEQA process. Next, future development allowed under the Project would adhere to state and local regulations that promote water conservation and policies in the proposed General Plan update that aim to conserve water by curbing demand for domestic and commercial purposes and promoting water conservation strategies, thus reducing demand for water. Finally, the water suppliers serving the city have water contingency plans that would be implemented in case of a water shortage event or drought. For these reasons, this impact would be less than significant.

As less growth would occur under Alternative 1 compared to the Project, demand for water would be less under the existing General Plan. As the city's water service providers have indicated that they have reliable supplies to meet anticipated demand under the Project, sufficient water supplies also exist to serve growth anticipated under Alternative 1. In addition, each individual development proposal under this alternative would also be required to address water supply as part of the CEQA process. Next, future development under Alternative 1 would continue to adhere to state and local regulations that promote water conservation, and existing General Plan policies that aim to conserve water. Finally, the water suppliers serving the city have water contingency plans that would be implemented in case of a water shortage event or drought. Therefore, the impact with respect to water supply would remain less than significant, similar to the Project, although the severity of this impact would be less as there would be less demand for water under Alternative 1 compared to the Project.

Wastewater Service Capacity

As discussed in Section 3.17, *Utilities and Service Systems*, of the Draft EIR, the Project would not result in a determination by the wastewater treatment provider which serves or may serve the project that it has inadequate capacity to serve the project's projected demand in addition to the provider's existing commitments as the wastewater treatment plant serving the Planning Area has sufficient remaining capacity to treat the full increase in sewage attributable to future growth anticipated under the proposed General Plan update. In addition, policies in the proposed General Plan update aim to conserve water by curbing demand for domestic and commercial purposes and promoting water conservation strategies, thus reducing demand for water, and in turn, the generation of wastewater. For these reasons, this impact would be less than significant.

As less growth would occur under Alternative 1 compared to the Project, less wastewater would be generated under the existing General Plan. As the wastewater treatment plant serving the Planning Area has sufficient remaining capacity to treat the full increase in sewage attributable to the Project, sufficient capacity also exists to treat wastewater generated by growth anticipated under Alternative 1. In addition, future development under Alternative 1 would continue to

adhere to existing General Plan policies that aim to conserve water, which in turn, would reduce the amount of wastewater generated. As a result, the impact with respect to wastewater service capacity would remain less than significant, similar to the Project, although the severity of this impact would be less as there would be less wastewater generated under Alternative 1 compared to the Project.

Solid Waste

As discussed in Section 3.17, *Utilities and Service Systems*, of the Draft EIR, the Project would not generate solid waste in excess of state or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals as the landfills that currently serve the city have adequate capacity to dispose of the full increase in solid waste attributable to future growth anticipated under the proposed General Plan update. In addition, compliance with existing solid waste regulations and policies in the proposed General Plan update would further address potential impacts. Therefore, this impact would be less than significant.

As less growth would occur under the existing General Plan compared to the Project, less solid waste would be generated under the existing General Plan. As the landfills serving the Planning Area currently have adequate capacity to dispose of the full increase in solid waste attributable to Project, sufficient capacity also exists to treat solid waste generated by growth anticipated under Alternative 1. In addition, future development under Alternative 1 would continue to adhere to existing solid waste regulations and existing General Plan policies that aim to reduce solid waste. As a result, the impact with respect to solid waste disposal capacity would remain less than significant, similar to the Project, although the severity of this impact would be less as there would be less solid waste generated under Alternative 1 compared to the Project.

Solid Waste Regulations

As discussed in Section 3.17, *Utilities and Service Systems*, of the Draft EIR, the Project would comply with federal, state, and local management and reduction statutes and regulations related to solid waste. In addition, the policies in the proposed General Plan update regarding solid waste disposal and associated public facilities would further ensure compliance with applicable regulations. As a result, this impact would be less than significant.

Development allowed under Alternative 1 would also comply with federal, state, and local management and reduction statutes and regulations related to solid waste. In addition, future development under Alternative 1 would continue to adhere to existing General Plan policies that aim to reduce solid waste. As a result, the impact with respect to solid waste regulations would remain less than significant, similar to the Project, although the severity of this impact would be less as there would be less solid waste generated under Alternative 1 compared to the Project.

Relationship of the Alternative to the Project Objectives

As described above, under the No Project Alternative growth in the city would occur based on land use designations and policies found in the existing 2004 General Plan. As a result, none of the land use designations and policies in the proposed General Plan update designed to foster a vibrant and sustainable community, respond to an increasingly diverse and aging population, and address a myriad of physical, environmental, and other challenges that the city faces would be

implemented. Therefore, this alternative would either not accomplish some of the project objectives (e.g., work with the community to articulate a vision for the city, and translating this vision into a viable implementation program.) or accomplish some of the project objectives but not to the same degree as the Project (e.g., reduce community-wide GHG emissions consistent with statewide targets).

4.6.2 Alternative 2 – Corridors Alternative

Environmental Impacts

Aesthetics

Scenic Vistas

As discussed in Section 3.1, *Aesthetics*, of this Draft EIR, the Project would not have a substantial adverse effect on a scenic vista as land use designations under the proposed General Plan update focus development toward portions of the Planning Area that are already developed, and thus relieves pressure to develop in open space and natural areas. In addition, the Project includes several policies that would regulate scenic quality and resources. For these reasons, this impact would be less than significant.

Development allowed under Alternative 2 would also be directed toward portions of the Planning Area that are already developed, and thus would relieve pressure to develop in open space and natural areas. In addition, the Corridors Alternative would include the same policies that regulate scenic quality and resources as are found in the Project. Therefore, the impact with respect to scenic vistas would remain less than significant, similar to the Project, and the severity of this impact would be similar.

Scenic Resources

As discussed in Section 3.1, *Aesthetics*, of this Draft EIR, the Project would not substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings, within a state scenic highway as there are no adopted or eligible state scenic highways located in Carson. As a result, no impact would occur.

Development allowed under Alternative 2 would also not damage scenic resources within a state scenic highway for the same reason as the Project. Therefore, no impact would occur with respect to scenic resources within a state scenic highway, similar to the Project, and the severity of this impact would be similar.

Consistency with Applicable Zoning and Regulations Governing Scenic Quality

As discussed in Section 3.1, *Aesthetics*, of this Draft EIR, the Project would not result in development that would conflict with applicable zoning and other regulations governing scenic quality as future development in the city would adhere to Carson Municipal Code provisions relating to development review and subdivision design and proposed General Plan policies that are intended to complement and further these provisions. With respect to the SOI, future development would adhere to applicable zoning and other regulations governing scenic quality, including the Los Angeles County General Plan and Code of Ordinances. For these reasons, this impact would be less than significant.

Development that would occur under Alternative 2 would also adhere to applicable zoning and other regulations governing scenic quality in urbanized areas, including the Los Angeles County General Plan and Code of Ordinances and Carson Municipal Code Section 9126.9. In addition, the Corridors Alternative would include the same policies that regulate scenic quality and resources as are found in the Project. Therefore, the impact with respect to consistency with applicable zoning and other regulations governing scenic quality would remain less than significant, similar to the Project, and the severity of this impact would be similar.

Light and Glare

As discussed in Section 3.1, *Aesthetics*, of this Draft EIR, the Project would not create a new source of substantial light or glare that would adversely affect day or nighttime views in the area as a future development would be required to comply with provisions within the Carson Municipal Code that would limit light and glare from new non-residential and residential development. In addition, the Project includes a policy that requires that a buffer be placed between industrial uses and existing or permitted residential, parks, schools or other sensitive uses. For these reasons, this impact would be less than significant.

Most new development allowed under Alternative 2 would take place in or near developed and urbanized major thoroughfares throughout the city, where moderate light and glare already exist, and would not be out of character with the urban environment. Under Alternative 2, higher density, modern industrial uses are increased along Broadway in the northern portion of the city and SOI and would therefore increase light and glare in the area compared to existing conditions. However, any development associated with Alternative 2 would also be required to comply with provisions within the Carson Municipal Code that would limit light and glare for new non-residential and residential development. In addition, the Corridors Alternative would include the same policy that requires that a buffer be placed between industrial uses and existing or permitted residential, parks, schools or other sensitive uses. Therefore, the impact with respect to light and glare would remain less than significant, similar to the Project, and the severity of this impact would be similar.

Air Quality

Air Quality Plan

As discussed in Section 3.2, *Air Quality*, of this Draft EIR, the Project would not conflict with or obstruct implementation of the applicable air quality plan during construction and operation as individual projects would be required to follow existing state and local rules and regulations to minimize short-term and long-term emissions, and thus would be consistent with and meet or exceed the requirements for control strategies found in the applicable air quality plan. In addition, as the applicable air quality plan is based on growth projections derived from the general plans of local jurisdictions with the air basin, as long as future growth in the city is consistent with the proposed General Plan update, it would not conflict with the applicable air quality plan. For these reasons, this impact would be less than significant.

The construction and operation of individual development projects allowed under Alternative 2 would also be required to follow existing state and local rules and regulations to minimize short-term and long-term emissions. In addition, as long as future growth in the city is consistent with

the Corridors Alternative, it would not conflict with the applicable air quality plan. Therefore, the impact with respect to a conflict with the applicable air quality plan during construction and operation would remain less than significant, similar to the Project, and the severity of this impact would be similar.

Criteria Pollutants

As discussed in Section 3.2, *Air Quality*, of this Draft EIR, the Project could result in a cumulatively considerable net increase of criteria pollutants for which the project region is non-attainment as the construction and operation of individual future projects would generate emissions of criteria pollutants that could exceed regional significance thresholds. Even with the implementation of project specific mitigation measures (MM AQ-1 and MM AQ-5), this impact would not be reduced to a less-than-significant level. As a result, this impact would be significant and unavoidable.

It is also possible that Alternative 2 could result in a cumulatively considerable net increase of criteria pollutants for which the project region is non-attainment for the same reason as the Project. Development under the Corridors Alternative was also implement mitigation measures MM-AQ-1 through MM-AQ-5. However, even with mitigation, this impact would also remain significant and unavoidable, similar to the Project, although the severity of this impact would be less as less growth would occur under Alternative 2 compared to the Project, and thus less traffic and VMT would be generated, which would result in fewer emissions of criteria pollutants from motor vehicles compared to the Project.

Substantial Pollutant Concentrations

As discussed in Section 3.2, *Air Quality*, of this Draft EIR, the Project could expose sensitive receptors to substantial pollutant concentrations as the construction and operation of individual future projects would generate emissions of NO_x, CO, PM10, and PM2.5 that could exceed LST established by the SCAQMD. In addition, the construction and operation of individual future projects could expose nearby sensitive receptors to levels of toxic air contaminants that could result in a potential increase in cancer, acute, and/or chronic risk. Even with the implementation of project specific mitigation measures (MM AQ-6 and MM AQ-7), this impact would not be reduced to a less-than-significant level. As a result, this impact would be significant and unavoidable.

Alternative 2 could also expose sensitive receptors to substantial pollutant concentrations during construction and operation for the same reasons as the Project. Development under the Corridors Alternative was also implement mitigation measures MM-AQ-6 and MM-AQ-7. However, even with mitigation, this impact would also remain significant and unavoidable, similar to the Project, and the severity of this impact would be similar.

Odors

As discussed in Section 3.2, *Air Quality*, of this Draft EIR, the Project could result in odors affecting a substantial number of people during both construction and operation as it is possible that some future development allowed under the proposed General Plan update could be large enough in scale and/or intensity such that substantial odors are generated. Therefore, project-related construction activities could result in a significant and unavoidable impact with respect for odors.

Development permitted under Alternative 2 could also result in odors affecting a substantial number of people during both construction and operation for the same reason as the Project. As a result, project-related construction and operational activities could also result in a significant and unavoidable impact with respect for odors, similar to the Project, and the severity of this impact would be similar.

Biological Resources

Special-Status Species

As discussed in Section 3.3, *Biological Resources*, of this Draft EIR, the Project could have a substantial adverse effect on special-status plant and wildlife species that occur within the Planning Area. However, with adherence to proposed General Plan policies related to the protection of biological resources, compliance with all applicable laws, regulations, and ordinances related to the protection of special-status plant and wildlife species, and implementation of project-specific mitigation measures (MM BIO-1 through MM BIO-9), this impact would be reduced to a less-than-significant level.

Development allowed under Alternative 2 could also have a substantial adverse effect on special-status plant and wildlife species that occur within the Planning Area. Development allowed under the Corridors Alternative would also adhere to proposed General Plan policies related to the protection of biological resources, comply with all existing regulations related to the protection of biological resources, and implement mitigation measures MM BIO-1 through MM BIO-9. Therefore, the impact to special-status plant and wildlife species under Alternative 2 is expected to be reduced to a less-than-significant level, similar to the Project, and the severity of this impact would be similar.

Riparian Habitat or Sensitive Natural Habitat

As discussed in Section 3.3, *Biological Resources*, of this Draft EIR, the Project could have a substantial adverse effect on riparian habitat or other sensitive natural communities that occur within the Planning Area. However, with adherence to proposed General Plan policies related to the protection of biological resources, compliance with all applicable laws, regulations, and ordinances related to the protection of riparian habitat or other sensitive natural communities, and with the implementation of project-specific mitigation (MM BIO-10 and MM BIO-11), this impact would be reduced to a less-than-significant level.

Development allowed under Alternative 2 could also have a substantial adverse effect on riparian habitat or other sensitive natural communities that occur within the Planning Area. Development allowed under the Corridors Alternative would also adhere to proposed General Plan policies related to the protection of biological resources, comply with all existing regulations related to the protection of biological resources, and implement mitigation measures MM BIO-10 and MM BIO-11. Therefore, the impact to riparian habitat or other sensitive natural communities under Alternative 2 is expected to be reduced to a less-than-significant level, similar to the Project, and the severity of this impact would be similar.

State or Federally Protected Wetlands

As discussed in Section 3.3, *Biological Resources*, of this Draft EIR, the Project would not have a substantial adverse effect on state or federally protected wetlands as wetlands in the city are either deed-restricted or under the control of other governmental entities (e.g., Los Angeles County Sanitation Districts). As a result, no impact would occur.

Development allowed under Alternative 2 would also not have a substantial adverse effect on state or federally protected wetlands for the same reason as the Project. Therefore, no impact would occur with respect to state or federally protected wetlands, similar to the Project, and the severity of this impact would be similar.

Wildlife Corridors or Wildlife Nursery Sites

As discussed in Section 3.3, *Biological Resources*, of this Draft EIR, the Project could 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. However, with adherence to proposed General Plan policies related to the protection of biological resources, compliance with all applicable laws, regulations, and ordinances related to the protection of wildlife corridors or wildlife nursery sites, and implementation of project-specific mitigation (MM BIO-5, MM BIO-10 and MM BIO-11), this impact would be reduced to a less-than-significant level.

Development allowed under Alternative 2 could also 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. Development allowed under the Corridors Alternative would also adhere to proposed General Plan policies related to the protection of biological resources, comply with all existing regulations related to the protection of wildlife corridors or wildlife nursery sites, and implement mitigation measures MM BIO-5, MM BIO-10 and MM BIO-11. Therefore, the impact to wildlife corridors or wildlife nursery sites under Alternative 2 is expected to be reduced to a less-than-significant level, similar to the Project, and the severity of this impact would be similar.

Conflict with Tree Preservation Policy or Ordinance

As discussed in Section 3.3, *Biological Resources*, of this Draft EIR, the Project would not conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance, as future development would be subject to the City's and County's tree preservation ordinances. As a result, no impact would occur.

Development allowed under Alternative 2 would also not conflict with a tree preservation policy or ordinance for the same reason as the Project. Therefore, no impact would occur with respect to a conflict with a tree preservation policy or ordinance, similar to the Project, and the severity this impact would be similar.

Conflict with Adopted Habitat Conservation Plan or Natural Community Conservation Plan

As discussed in Section 3.3, *Biological Resources*, of this Draft EIR, the Project would not conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community

Conservation Plan, or other approved local, regional, or state habitat conservation plan, as there are no such plans adopted for the Planning Area. As a result, no impact would occur.

Development allowed under Alternative 2 would also not conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan for the same reason as the Project. Therefore, no impact would occur with respect to such plans, similar to the Project, and the severity of this impact would be similar.

Cultural Resources

Historic Resources

As discussed in Section 3.4, *Cultural Resources*, of this Draft EIR, the Project could cause a substantial adverse change in the significance of a historical resource pursuant to §15064.5. Even with adherence to proposed General Plan policies related to the protection of cultural resources and implementation of MM-CUL-1, this impact would not be reduced to a less-than-significant level. As a result, this impact would be significant and unavoidable.

Development allowed under Alternative 2 could also cause a substantial adverse change in the significance of a historical resource pursuant to §15064. Development allowed under the Corridors Alternative would also adhere to proposed General Plan policies related to the protection of cultural resources and implement mitigation measure MM CUL-1. However, this impact would also remain significant and unavoidable for the same reason listed above, similar to the Project, although the severity of this impact would be less as less growth would occur under Alternative 1, and thus there would be less potential to negatively affect historic resources.

Archaeological Resource

As discussed in Section 3.4, *Cultural Resources*, of this Draft EIR, the Project could cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5. However, with the implementation of MM CUL-2, this impact would be reduced to a less-than-significant level.

Development allowed under Alternative 2 could also cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064. Development allowed under the Corridors Alternative would also implement mitigation measure MM CUL-2. Therefore, the impact to archaeological resources is expected to be reduced to a less-than-significant level, similar to the Project, although the severity of this impact would be less as less growth would occur under Alternative 1, and thus there would be less potential to negatively affect archaeological resources.

Human Remains

As discussed in Section 3.4, *Cultural Resources*, of this Draft EIR, the Project could disturb human remains, including those interred outside of formal cemeteries. However, as future development under the proposed General Plan update would adhere to existing state regulations governing the discovery of human remains, the impact with respect to human remains would be less than significant.

Development allowed under Alternative 2 would also adhere to existing state regulations governing the discovery of human remains. Therefore, the impact with respect to human remains would remain less than significant, similar to the Project, although the severity of this impact would be less as less growth would occur under Alternative 1, and thus there would be less potential to negatively affect human remains.

Energy

Wasteful, Inefficient, or Unnecessary Consumption of Energy Resources

As discussed in Section 3.5, *Energy*, of this Draft EIR, the Project would not result in a potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources for several reasons. During the construction, electricity use would be short-term, limited to working hours, and used only for necessary construction-related activities. Furthermore, the use of natural gas during construction would be of limited amounts and on a temporary basis and would specifically be used to replace or offset diesel-fueled equipment. Finally, fuel-efficient construction equipment would be utilized and construction equipment and vehicles would also be required to comply with anti-idling regulations. With respect to operation, all new development under the proposed General Plan update would comply with the applicable provisions of Title 24 and the CALGreen Code. In addition, the location, design, and land uses of the growth anticipated with adoption of the proposed General Plan update would implement land use and transportation strategies aimed at reducing vehicle trips, and thus would reduce the consumption of fuel. For these reasons, this impact would be less than significant.

Alternative 2 would also not result in a potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources during construction and operation for the same reasons as the Project. The Corridors Alternative would implement similar land use and transportation strategies aimed at reducing vehicle trips as the Project. Alternative 2 would also implement similar applicable climate change scoping plan GHG reduction strategies, which have co-benefits of reducing building energy and transportation fuel demand, as the Project. As a result, the impact with respect to the wasteful, inefficient, or unnecessary consumption of energy resources during construction and operation would remain less than significant, similar to the Project, although the severity of this impact would be less as less growth would occur under Alternative 2 compared to the Project, and thus less traffic would be generated, which would result in the consumption of less fuel compared to the Project.

Conflict with State or Local Renewable Energy Plan

As discussed in Section 3.5, *Energy*, of this Draft EIR, construction of development permitted by the Project would not conflict with or obstruct a state or local plan for renewable energy or energy efficiency as individual projects would utilize construction contractors who must demonstrate compliance with applicable regulations. In addition, truck fleet operators must upgrade their fleets with vehicles that meet adopted fuel-efficiency standards for medium- and heavy-duty trucks. With respect to operation, individual projects would be designed in a manner that is consistent with relevant energy conservation plans created to encourage development that results in the efficient use of energy resources. In addition, the proposed General Plan update incorporates the policies for energy efficiency and renewable energy that are found in the City's CAP. For these reasons, this impact would be less than significant.

Individual projects under Alternative 2 would also not conflict with or obstruct a state or local plan for renewable energy or energy efficiency for the same reasons as the Project. In addition, the Corridors Alternative also incorporates the policies for energy efficiency and renewable energy that are found in the City's CAP. Therefore, the impact with respect to a conflict with a state or local plan for renewable energy or energy efficiency during operation would remain less than significant, similar to the Project, and the severity of this impact would be similar.

Geology and Soils

Geologic Hazards

As discussed in Section 3.6, *Geology and Soils*, of this Draft EIR, the Project would not directly or indirectly cause substantial adverse effects involving the risk of geologic hazards as the potential for seismic hazards due to fault rupture, ground shaking, and seismically induced landslides in Carson is relatively low due to the limited presence of known faults and absence of landslide hazard areas in the Planning Area. However, a significant portion of Carson is subject to liquefaction. All future development allowed under the proposed General Plan update would be required to prepare a geotechnical investigation report as part of the environmental and building permit process, and follow policies listed in the Project, which require that projects adhere to state and local regulations, such as CBC, to address seismic hazards. As a result, this impact would be less than significant.

As development allowed under Alternative 2 would also occur within the Planning Area, it would also not directly or indirectly cause substantial adverse effects involving geologic hazards, such as fault rupture, strong seismic ground shaking, and landslides. With respect to seismic-related ground failure, including liquefaction, all future development under the Corridors Alternative would also be required to prepare a geotechnical investigation report as part of the environmental and building permit process. Finally, development allowed under Alternative 2 would also be required to adhere to state and local regulations, such as the CBC. For these reasons, the impact with respect to geologic hazards would remain less than significant, similar to the Project, and the severity of this impact would be similar.

Soil Erosion or Loss of Topsoil

As discussed in Section 3.6, *Geology and Soils*, of this Draft EIR, the Project would not result in substantial soil erosion or the loss of topsoil as the proposed General Plan update includes policies that require the use of BMPs to control soil erosion during and after ground-disturbing activities and the preparation of site-specific geotechnical investigations for projects requiring grading permits. In addition, future development that disturbs more than one acre would be subject to compliance with a NPDES permit, which would include implementation of BMPs and preparation of a SWPPP, which would include erosion prevention measures that have proven effective in limiting soil erosion and loss of topsoil. As a result, this impact would be less than significant.

Development allowed under Alternative 2 would also be required to adhere to policies found in the proposed General Plan update that require the use of BMPs to control soil erosion during and after ground-disturbing activities and the preparation of site-specific geotechnical investigations for projects requiring grading permits. Development allowed under the Corridors Alternative would also be subject to compliance with a NPDES permit, including the preparation of a

SWPPP. Therefore, the impact with respect to soil erosion or loss of topsoil would be less than significant, similar to the Project, and the severity of the impact would be similar.

Unstable and Expansive Soils

As discussed in Section 3.6, *Geology and Soils*, of this Draft EIR, the Project would not have a significant impact with respect to unstable soils, such as on- or off-site landslide, lateral spreading, subsidence, liquefaction, or collapse, and expansive soils as the proposed General Plan update includes policies that address risk of exposure to geologic hazards by mandating site-specific geotechnical investigations and mitigation prior to development. As a result, this impact would be less than significant.

Development allowed under Alternative 2 would also be required to adhere to policies found in the proposed General Plan update that mandate the preparation of site-specific geotechnical investigations and mitigation prior to development. Therefore, the impact with respect to unstable and expansive soils would remain less than significant, similar to the Project, and the severity of this impact would be similar.

Paleontological Resources

As discussed in Section 3.6, *Geology and Soils*, of this Draft EIR, the Project would not directly or indirectly destroy a unique paleontological resource or site or unique geologic feature as policies in the proposed General Plan update require the preparation of site-specific paleontological studies prior to development and paleontological resources monitoring for any project that has a high potential for encountering subsurface paleontological resources. As a result, this impact would be less than significant.

Development allowed under Alternative 2 would also be required to adhere to policies found in the proposed General Plan update that required the preparation of site-specific paleontological studies prior to development and paleontological resources monitoring. Therefore, the impact with respect to paleontological resources would remain less than significant, similar to the Project, and the severity of this impact would be similar.

Greenhouse Gas Emissions

Emissions

As discussed in Section 3.7, *Greenhouse Gas Emissions*, of this Draft EIR, the Project would not generate GHG emissions, either directly or indirectly, that may have a significant impact on the environment during construction as each future project developed under the proposed General Plan update would be required to comply with applicable federal, state, and local regulations that would reduce the amount of GHG emissions generated by construction equipment and activities. With respect to operation, the Project would not generate GHG emissions, either directly or indirectly, that may have a significant impact on the environment as the net change in operational emissions from existing conditions (2016) compared to existing plus buildout of new development under the proposed General Plan update at 2040 buildout would be negative compared to existing (2016) conditions. For these reasons, this impact would be less than significant.

Alternative 2 would also not generate GHG emissions, either directly or indirectly, that may have a significant impact on the environment during construction for the same reasons as the Project. Therefore, the impact with respect to the generation of GHG emissions during construction would remain less than significant, similar to the Project, and the severity of this impact would be similar.

With respect to operation, as less growth would occur under Alternative 2, less traffic would be generated and less building space would be constructed, and thus fewer GHG emissions would be generated from motor vehicles and the heating and cooling of buildings. As the net change in operational emissions from existing conditions (2016) compared to buildout of the Project in 2040 would be negative compared to existing (2016) conditions, the net change in operational emissions from existing conditions (2016) compared to buildout of Alternative 2 in 2040 would also be negative compared to existing (2016) conditions. Therefore, the impact with respect to the generation of GHG emissions during operation would remain less than significant, similar to the Project, although the severity of this impact would be less as less traffic would be generated under Alternative 2, thus resulting in fewer GHG emissions compared to the Project.

Conflict with Greenhouse Gas Reduction Plans, Policies, and Regulations

As discussed in Section 3.7, *Greenhouse Gas Emissions*, of this Draft EIR, the Project would not conflict with any applicable plan, policy or regulation adopted for the purpose of reducing the emissions of GHGs as development permitted under the proposed General Plan update would be consistent with applicable climate change scoping plan GHG reduction strategies. In addition, it is reasonable to expect the GHG emissions from future development anticipated by the Project would decline over time due to regulatory initiatives and technical innovations, and thus development permitted by the proposed General Plan update would not conflict with or interfere with the ability of the state to achieve its GHG reduction goal of 80 percent below 1990 levels by 2050 as stated in Executive Order S-3-05. Next, the Project would be consistent with applicable 2020-2045 SCAG RTP/SCS (Connect SoCal) actions and strategies, which work to reduce GHG emissions generated by the transportation sector by aligning transportation, land use, and housing strategies. Finally, the development permitted by the proposed General Plan update be required to be consistent with the City's CAP. For these reasons, this impact would be less than significant.

Development permitted under Alternative 2 would also implement similar applicable climate change scoping plan GHG reduction strategies as the Project. In addition, it is also reasonable to expect the GHG emissions from future development anticipated by the Corridors Alternative would decline over time due to regulatory initiatives and technical innovations. Finally, future development under Alternative 2 would be designed to be consistent with 2020–2045 SCAG RTP/SCS (Connect SoCal) actions and strategies and the City's CAP. Therefore, the impact with respect to a conflict with respect to GHG reduction plans, policies, and regulations would likely remain less than significant, similar to the Project, and the severity of this impact would be similar.

Hazards and Hazardous Materials

Routine Use, Transportation, Disposal, or Accidental Release of Hazardous Materials

As discussed in Section 3.8, *Hazards and Hazardous Materials*, of this Draft EIR, the Project would not create a significant hazard to the public or the environment through the routine use, transport, disposal, or accidental release of hazardous materials as the construction and operation

of future development allowed under the proposed General Plan update would adhere to applicable federal, state, and local regulations governing the transportation, use, handling, and disposal of hazardous materials. As a result, this impact would be less than significant.

Development allowed under Alternative 2 would also not create a significant hazard to the public or the environment through the routine use, transport, disposal, or accidental release of hazardous materials during construction and operation for the same reason as the Project. Therefore, the impact with respect to the transportation, use, handling, and disposal of hazardous materials would remain less than significant, similar to the Project, and the severity of this impact would be similar.

Emit Hazardous Emissions, Handle Hazardous Materials, etc., near a School

As discussed in Section 3.8, *Hazards and Hazardous Materials*, of this Draft EIR, the Project would not result in hazardous emissions or the handling of hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school site as existing and future development under the proposed General Plan update in the vicinity of an existing or proposed school site would adhere to applicable federal, state, and local regulations governing the transportation, use, handling, and disposal of hazardous materials. As a result, this impact would be less than significant.

Development allowed under Alternative 2 would also not result in hazardous emissions or the handling of hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school site for the same reasons the Project. Therefore, the impact with respect to the transportation, use, handling, and disposal of hazardous materials would remain less than significant, similar to the Project, and the severity of this impact would be similar.

Hazardous Materials Sites

As discussed in Section 3.8, *Hazards and Hazardous Materials*, of this Draft EIR, the Project would not create a significant hazard to the public or environment from a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 as future development under the proposed General Plan update would adhere to applicable federal, state, and local regulations that provide procedures for the testing, handling, disposal, and remediation of hazardous materials. As a result, this impact would be less than significant.

Development allowed under Alternative 2 would also not create a significant hazard to the public or environment from a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 for the same reason as the Project. Therefore, the impact with respect to creating a significant hazard to the public or environment from a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 would remain less than significant, similar to the Project, and the severity of this impact would be similar.

Airport Land Use Plan Conflicts

As discussed in Section 3.8, *Hazards and Hazardous Materials*, of this Draft EIR, the Project would not be located within an airport land use plan or, where such plan has not been adopted, within two miles of a public airport or public use airport as future development under the proposed General Plan update would not fall within the noise contours or airport influence area of

the Compton/Woodley Airport, which is the only airport located within two miles of the city limits. As a result, this impact would be less than significant.

Development allowed under Alternative 2 would also not be located within an airport land use plan or, where such plan has not been adopted, within two miles of a public airport or public use airport for the same reason as the Project. Therefore, the impact with respect to airport land use plan conflicts would remain less than significant, similar to the Project, and the severity of this impact would be similar.

Emergency Response Plan

As discussed in Section 3.8, *Hazards and Hazardous Materials*, of this Draft EIR, the Project would not impair implementation of or interfere with an adopted emergency response plan or emergency evacuation plan as future development under the proposed General Plan update would be required to be consistent with policies contained in the Project that require the City to ensure adequate emergency access. As a result, this impact would be less than significant.

Development allowed under Alternative 2 would also be required to be consistent with policies contained in the Project that require the City to ensure adequate emergency access. As a result, the impact with respect to the impairment or interference with an adopted emergency response plan or emergency evacuation plan would remain less than significant, similar to the Project, and the severity of this impact would be similar.

Wildland Fire Hazards

As discussed in Section 3.8, *Hazards and Hazardous Materials*, of this Draft EIR, the Project would not expose people or structures, either directly or indirectly, to a significant risk of loss, injury, or death involving wildland fires as the city is not located in a Very Fire Hazard Severity Zone and the construction of future development under the proposed General Plan update would comply with all applicable fire protection and prevention regulations specified in the California Fire Code, Hazardous Materials Transportation regulations, and Cal/OSHA regulations. As a result, no impact would occur.

Development allowed under Alternative 2 would also not expose people or structures, either directly or indirectly, to a significant risk of loss, injury, or death involving wildland fires for the same reasons as the Project. Therefore, no impact would occur with respect to wildfire hazards, similar to the Project, and the severity of this impact would be similar.

Hydrology and Water Quality

Water Quality

As discussed in Section 3.9, *Hydrology and Water Quality*, of the Draft EIR, the Project would not violate any water quality standards or waste discharge requirements or otherwise substantially degrade water quality as future development under the proposed General Plan update would adhere to applicable federal, state, and local regulations pertaining to water quality. In addition, the Project contains policies that promote improved water quality in the city and continued compliance with federal, state, and local water quality regulations, which would ensure that water quality is protected to the maximum extent practicable. As a result, this impact would be less than significant.

Development allowed under Alternative 2 would also adhere to applicable federal, state, and local regulations pertain to water quality and be consistent with proposed General Plan policies that promote improved water quality. Therefore, the impact with respect to water quality would remain less than significant, similar to the Project, and the severity of this impact would be similar.

Groundwater

As discussed in Section 3.9, *Hydrology and Water Quality*, of the Draft EIR, the Project would not substantially deplete groundwater supplies or interfere substantially with groundwater recharge as the groundwater basins serving the city are adjudicated, and thus have limits on the amount of groundwater that is pumped for potable use, and the replenishment of groundwater in the city is not reliant on natural recharge or percolation. Therefore, this impact would be less than significant.

Development allowed under Alternative 2 would also not substantially deplete groundwater supplies or interfere substantially with groundwater recharge for the same reason as the Project. As a result, the impact with respect to groundwater recharge would remain less than significant, similar to the Project, and the severity of this impact would be similar.

Drainage

As discussed in Section 3.9, *Hydrology and Water Quality*, of the Draft EIR, the Project would not substantially alter existing drainage patterns in the city as majority of development allowed under the proposed General Plan update would occur in areas that are already developed with existing impervious surfaces. In addition, anticipated growth in the city would adhere to existing local regulations governing floodplain management and runoff pollution control, and would comply with the policies contained in the proposed General Plan update that seek to reduce localized flooding and ensure that areas experiencing localized flooding problems are targeted for storm drain improvements. For these reasons, this impact would be less than significant.

Development allowed under Alternative 2 would also occur in areas that are already developed with existing impervious surfaces. In addition, growth under the Corridors Alternative would also adhere to existing local regulations governing floodplain management and runoff pollution control and comply with policies contained in the proposed General Plan update. Therefore, the impact with respect to drainage would remain less than significant, similar to the Project, and the severity of this impact would be similar.

Inundation

As discussed in Section 3.9, *Hydrology and Water Quality*, of the Draft EIR, the Project would not risk release of pollutants due to project inundation from a flood, tsunami or seiche due to the city's inland location and lack of enclosed water bodies. In addition, anticipated growth in the city would adhere to existing local regulations pertaining to flood control and would implement proposed General Plan policies addressing flooding. As a result, this impact would be less than significant.

As development allowed under Alternative 2 would also occur within the Planning Area, it would also not be subject to inundation from a tsunami or seiche. In addition, growth anticipated under the Corridor Alternatives would also adhere to existing local regulations and implement goals and implement proposed General Plan policies addressing flooding. Therefore, the impact with

respect to inundation would remain less than significant, similar to the Project, and the severity of this impact would be similar.

Water Quality Plan or Sustainable Groundwater Management Plan

As discussed in Section 3.9, *Hydrology and Water Quality*, of the Draft EIR, the Project would not conflict with or obstruct implementation of a water quality control plan as anticipated growth in the city would adhere applicable federal, state, and local regulations pertaining to water quality and would implement General Plan policies that protect water quality. In addition, the water basins underlying the city are adjudicated and adjudicated basins are not required to prepare sustainable groundwater management plans. For these reasons, this impact would be less than significant.

Development allowed under Alternative 2 would also adhere applicable federal, state, and local regulations pertaining to water quality and would implement General Plan policies that protect water quality. In addition, as growth anticipated under the current General Plan would be within the same Planning Area, it would not conflict with a sustainable groundwater management plan as the basins under the Planning Area are adjudicated. Therefore, the impact with respect to a water quality plan or sustainable groundwater management plan would remain less than significant, similar to the Project, and the severity of this impact would be similar.

Land Use and Planning

Physically Divide a Community

As discussed in Section 3.10, *Land Use and Planning*, of the Draft EIR, the Project would not physically divide an established community as policies in the proposed General Plan update promote improved connectivity and land use consistency within and between existing neighborhoods. As a result, this impact would be less than significant.

Mixed-use development along the main corridors under Alternative 2 would foster more linkages and connectivity throughout the city as well as support multimodal connectivity to the region. Moreover, the Planning Area is largely built out and new development would occur within areas that are already served by infrastructure, and thus development under the Corridors Alternative would not necessitate new roads or other infrastructure that would physically divide an established community. Therefore, the impact with respect to physically dividing an established community would remain less than significant, similar to the Project, and the severity of this impact would be similar.

Consistency with Applicable Land Use Plans

As discussed in Section 3.10, *Land Use and Planning*, of the Draft EIR, the Project would not 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 as proposed General Plan policies would not conflict with current 2004 General Plan policies or existing planning regulations designed to implement the 2004 General Plan and subsequent amendments. In addition, the proposed General Plan update takes into account changes to land use designations within the boundaries of various adopted specific plans in the city. Finally, the Project would not conflict with the region's RTP/SCS (Connect SoCal) as policies within the proposed General Plan update would integrate land use, housing, and transportation planning to achieve regional GHG

emission reductions by promoting compact, infill, and mixed-use development. For these reasons, this impact would be less than significant.

While many of the concepts for the land use designations of Alternative 2 are similar to those of the Project, the way in which they are achieved differ slightly. The Corridors Alternative introduces mixed-use designations such as Downtown High Density Mixed-Use, Mixed-Use, and Industrial Flex, which are similar to the Downtown Mixed Use, Corridor Mixed Use, and Flex District designations of the Project. Likewise, R&D in Alternative 2 is similar to Business Residential Mixed Use of the Project, without the residential component. However, the Corridors Alternative retains characteristics of the existing General Plan, including multiple commercial designations (Commercial and Visitor Commercial), as well as a distinct Office designation. Aside from these designations and consolidation of General and Recreational open space into Parks/Open Space, Alternative 2 maintains the industrial and single-family designations that make up the vast majority of the remaining Planning Area; this approach is also reflected in the Project.

Development allowed under Alternative 2 would also not 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 for the same reasons listed above. However, Alternative 2 would not provide sufficient land capacity to fully meet the City's housing allocation under the 6th cycle of the RNHA. In addition, all future growth in the city's SOI must be consistent with the Los Angeles County General Plan and Los Angeles County zoning regulations. Therefore, the impact with respect to consistency with applicable plans would remain less than significant, similar to the Project, although the severity of this impact would be greater as Alternative 2 would not provide the capacity to fully meet the City's 6th cycle RNHA allocation.

Noise and Vibration

Temporary or Permanent Increase in Ambient Noise Levels

As discussed in Section 3.11, *Noise*, of the Draft EIR, construction of future development allowed under the Project would not result in the generation of a substantial temporary increase in ambient noise levels in excess of City standards as individual projects would be required to conduct their own CEQA analysis and implement mitigation in the event that noise generated during construction exceed thresholds. In addition, operation of future development allowed under the Project would not result in a substantial permanent increase in ambient noise levels in the city in excess of City standards as future traffic noise along major roadway segments in the city would not be discernably different when compared to existing traffic noise levels. Therefore, this impact would be less than significant.

Construction of future development allowed under Alternative 2 would also not result in the generation of a substantial temporary increase in ambient noise levels in excess of City standards for the same reason as the Project. As a result, the impact with respect to construction noise would remain be less than significant, similar to the Project, and the severity of this impact would be similar.

With respect to operation, as less growth would occur under Alternative 2, less traffic would be generated along streets in the Planning Area, and thus less noise from traffic would be generated.

As future traffic noise along major roadway segments in the city from the Project would not be discernably different when compared to existing traffic noise levels, future traffic noise along major roadway segments in the city from Alternative 2 would also not be discernably different when compared to existing traffic noise levels. As a result, the impact with respect to traffic noise would remain less than significant, similar to the Project, although the severity of this impact would be less as less traffic would be generated by Alternative 2, thus resulting in less traffic noise compared to the Project.

Excessive Groundborne Vibration or Groundborne Noise

As discussed in Section 3.11, *Noise*, of the Draft EIR, construction of future development allowed under the Project would not result in the generation of excessive groundborne vibration or groundborne noise as individual projects would be required to conduct their own CEQA analysis and implement mitigation in the event that vibration generated during construction exceed thresholds. In addition, traffic generated by future development allowed under the Project would not result in the generation of excessive groundborne vibration or groundborne noise as vibration from vehicles is temporary and intermittent, and would be well below the thresholds for human annoyance and structural damage. For these reasons, this impact would be less than significant.

Construction of future development allowed under Alternative 2 would not result in the generation of excessive groundborne vibration or groundborne noise. As a result, the impact with respect to construction vibration would remain less than significant, similar to the Project, and the severity of this impact would be similar.

With respect to operation, as less growth would occur under Alternative 2, less traffic would be generated along streets in the Planning Area, and thus less vibration from traffic would be generated. As vibration from vehicles associated with the Project is temporary and intermittent, and would be well below the thresholds for human annoyance and structural damage, vibration from vehicles associated with the Alternative 2 would also is temporary and intermittent, and would be well below the thresholds for human annoyance and structural damage. Therefore, the impact with respect to traffic vibration would remain less than significant, similar to the Project, although the severity of this impact would be less as less traffic would be generated by Alternative 2, thus resulting in less traffic vibration compared to the Project.

Airport Noise

As discussed in Section 3.11, *Noise*, of the Draft EIR, the Project would not expose people residing or working in the Planning Area to excessive noise levels generated by aircraft as the city is not located within the vicinity of a private airstrip or airport land use plan, and thus is not within the 60 dBA CNEL of any airport. Therefore, this impact would be less than significant.

Development allowed under Alternative 2 would also not expose people residing or working in the Planning Area to excessive noise levels generated by aircraft for the same reason as the Project. As a result, the impact with respect to airport noise would remain less than significant, similar to the Project, and the severity of this impact would be similar.

Population and Housing

Induce Unplanned Population Growth

As discussed in Section 3.12, *Population and Housing*, of the Draft EIR, the Project would not induce substantial unplanned population growth in an area, directly nor indirectly, as the proposed General Plan update is a long-range planning effort that was designed to accommodate regional growth requirements for the next 20 years. In addition, proposed General Plan policies seek to provide housing that meets the diverse needs of Carson's growing population while preserving existing neighborhoods, as well as ensuring that public facilities, services, and infrastructure maintain a level of service that supports a high quality of life for all residents. As a result, this impact would be less than significant.

Alternative 2 would result in less population and housing but more jobs growth than the Project, which would further inflate the jobs to housing ratio. In comparison, the Project provides a more balanced jobs to housing ratio by allowing more housing development while maintaining a healthy growth in employment opportunities. Further, because Alternative 2 includes more single-use designations such as Visitor Commercial, Office, and R&D, it would result in less variety of uses, including residential, in these areas than would occur under the Project.

The Corridors Alternative was also designed to accommodate regional growth requirements for the next 20 years. In addition, Alternative 2 would adhere to proposed General Plan policies that balance the city's existing and future needs. Therefore, the impact with respect to the inducement of unplanned population growth would remain be less than significant, similar to the Project, although the severity of this impact would be less as less growth would occur under Alternative 2 compared to the Project.

Construction of New Housing

As discussed in Section 3.12, *Population and Housing*, of the Draft EIR, the Project would not displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere, as proposed General Plan land use designations and policies would increase allowable intensities and residential densities in more areas of the city, thereby increasing capacity for new housing. Additionally, the Housing Element, which was prepared separately and adopted as of February 1, 2022, has been designed to be consistent with the proposed General Plan update and reflects the new land use designations that allow greater residential densities in order to meet the City's RHNA obligation for the 2021-2029 housing element cycle. For these reasons, the impact would be less than significant.

Alternative 2 would adhere to proposed General Plan land use designations and policies would increase allowable intensities and residential densities in more areas of the city, thereby increasing capacity for new housing. Additionally, the Corridors Alternative would provide adequate supply of housing at all income levels, including replacement of any existing or protected units demolished during redevelopment, as well as adequate mitigation of impacts on displaced residents, such as those living in mobile home parks, per state law. Therefore, the impact with respect to the construction of new housing would remain be less than significant, similar to the Project, although the severity of this impact would be less as less growth would occur under Alternative 2 compared to the Project.

Public Services

Fire and Police Service

As discussed in Section 3.13, *Public Services*, of the Draft EIR, the Project would not result in substantial adverse physical impacts associated with the provision of new or physically altered fire and police service facilities as future development would be concentrated in areas already well-served by existing fire and police facilities, and if new fire and police facilities are required, the construction of these facilities would have minimal effects on the environment with compliance with existing regulations and proposed General Plan policies. In addition, the proposed General Plan update promotes compact development patterns through infill development, ensuring new development would be located within close proximity to existing fire stations and police station. For these reasons, this impact would be less than significant.

As less growth would occur under Alternative 2 compared to the Project, demand for fire and police service would be less under the Corridors Alternative than under the proposed General Plan update. In addition, growth under Alternative 2 would comply with policies in the existing General Plan regarding fire safety education, public safety programs, coordination with the County Fire and Sheriff's departments, compact development, and emergency access similar to the Project. Therefore, the impact with respect to fire and police services would remain less than significant, similar to the Project, although the severity of this impact would be less as there would be less demand for these services under Alternative 2 compared to the Project.

Schools

As discussed in Section 3.13, *Public Services*, of the Draft EIR, the Project would not result in substantial adverse physical impacts associated with the provision of new or physically altered school facilities as schools in the Planning Area have sufficient facility capacity to meet projected enrollment needs. As a result, existing facilities capacity would still be sufficient. If new school facilities are required, the construction of these facilities would have minimal effects on the environment with compliance with existing regulations and proposed General Plan policies. In addition, all new development would pay school impact fees, which fully mitigates the impacts of development on school facilities for purposes of CEQA per SB 50. For these reasons, this impact would be less than significant.

As less growth would occur under Alternative 2 compared to the Project, fewer students would attend local schools under the Corridors Alternative than under the proposed General Plan update. If new school facilities are required, the construction of these facilities would also have minimal effects on the environment with compliance with existing regulations and proposed General Plan policies. In addition, all new development under Alternative 2 would also be required to pay school impact fees. Therefore, the impact with respect to schools would remain less than significant, similar to the Project, although the severity of this impact would be less as there would be less demand for schools under Alternative 2 compared to the Project.

Parks

A comparison of impacts to parks and recreation facilities between the Project and Alternative 2 is provided below under "Recreation."

Other Public Facilities

As discussed in Section 3.13, *Public Services*, of the Draft EIR, the Project would not result in substantial adverse physical impacts associated with the provision of new or physically altered government facilities, such as community centers and libraries, as the construction of these facilities, if needed, would have minimal effects on the environment with compliance with existing regulations and proposed General Plan policies. As a result, this impact would be less than significant.

As less growth occur under Alternative 2, demand for other public facilities, such as community centers and libraries, would be less under the Corridors Alternative than under the proposed General Plan update. If new public facilities are required, the construction of these facilities would also have minimal effects on the environment with compliance with existing regulations and proposed General Plan policies. Therefore, the impact with respect to public facilities would remain less than significant, similar to the Project, although the severity of this impact would be less as there would be less demand for these facilities under Alternative 2 compared to the Project.

Recreation

Deterioration of Existing Recreational Facilities

As discussed in Section 3.14, *Recreation*, of the Draft EIR, the Project would not increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated as the Project would add more than 180 acres of parkland to the City's inventory, which exceeds the required 84.7 additional acres of parkland that the city would need to meet future demand. In addition, the Project includes provisions to ensure ongoing expansion, investment in, and maintenance of public recreation facilities, thus minimizing substantial physical deterioration of existing or new facilities. Finally, policies in the proposed General Plan update are designed to minimize the environmental impact of park and recreational facility development, including the development of design and site planning standards that consider energy and water efficiency, sustainable design elements, and habitat and cultural resource preservation. For these reasons, this impact would be less than significant.

As less growth would occur under Alternative 2 compared to the Project, the use of existing neighborhood and regional parks or other recreational facilities would be less under the Corridors Alternative than under the proposed General Plan update. However, the amount of parkland to be added under Alternative 2 would not be enough to meet future demand of 64.8 acres of parkland under the Corridors Alternative. Therefore, while development under Alternative 2 would adhere to provisions in the proposed General Plan update to ensure ongoing expansion, investment in, and maintenance of public recreation facilities, the impact with respect to the deterioration of existing recreational facilities would be significant and unavoidable as no feasible mitigation is available, and thus the severity of this impact would be greater compared to the Project.

Construction or Expansion of Recreational Facilities

As discussed in Section 3.14, *Recreation*, of the Draft EIR, the Project would result in the development of new parks and recreational facilities. However, construction of these facilities would not have an adverse physical effect on the environment as new parks and recreational facilities would be subject to CEQA requirements for environmental assessment. Although

compliance would not necessarily guarantee that significant impacts would be avoided or mitigated, it would allow for the identification and consideration of potential impacts and mitigation. In addition, the Project includes policies that are designed to minimize the environmental impact of development of new parks or recreational facilities. For these reasons, this impact would be less than significant.

Growth under Alternative 2 would also result in the development of new parks and recreational facilities. Like the Project, construction of new parks and recreational facilities would also be subject to CEQA requirements for environmental assessment. If the construction or expansion of recreational facilities are required, the construction of these facilities would also have minimal effects on the environment with compliance with existing regulations and proposed General Plan policies. Therefore, the impact with respect to the construction or expansion of recreational facilities would remain less than significant, similar to the Project, and the severity of this impact would be similar.

Transportation

Conflict with Adopted Circulation Program, Plan, Ordinance, or Policy

As discussed in Section 3.15, *Transportation*, of the Draft EIR, the Project would not conflict with a program, plan, ordinance or policy addressing the circulation system, including transit, roadway bicycle and pedestrian facilities due to the availability of non-vehicular transportation options for the community. In addition, policies included in the proposed General Plan update would balance the multimodal transportation network by providing alternatives to the automobile, improving transit service connections, and encouraging the use of alternative modes of transportation. As a result, this impact would be less than significant.

Future development under Alternative 2 would also not conflict with a program, plan, ordinance or policy addressing the circulation system as non-vehicular transportation options for the community would also be available under continued growth as permitted by the Corridors Alternative. In addition, development under Alternative 2 would adhere to policies included in the proposed General Plan update that balance the multimodal transportation network. As a result, the impact with respect to a conflict with an adopted circulation program, plan, ordinance, or policy would remain less than significant, similar to the Project, and the severity of this impact would be similar.

Vehicle Miles Traveled

As discussed in Section 3.15, *Transportation*, of the Draft EIR, the Project would conflict or be inconsistent with CEQA Guidelines Section 15064.3, Subdivision (b) as Total VMT per Service Population associated with growth under the proposed General Plan update would not achieve a 15 percent or more reduction compared to the baseline. Although policies promoting a reduction of VMT per capita are included in the proposed General Plan update, no feasible mitigation is available to reach the 15 percent or more reduction threshold. As a result, this impact would be significant and unavoidable.

As less growth would occur under Alternative 2 compared to the Project, less traffic would be generated along streets in the Planning Area, and thus less VMT would be generated under the

Corridors Alternative. However, this reduction in VMT under Alternative 2 would not likely be enough to achieve a 15 percent or more reduction compared to the baseline. Therefore, while development under Alternative 2 would adhere to policies promoting a reduction of VMT per capita are included in the proposed General Plan update, this impact would remain significant and unavoidable, similar to the Project, although the severity of this impact would be less as less traffic would be generated under Alternative 2 compared to the Project.

Design Hazards

As discussed in Section 3.15, *Transportation*, of the Draft EIR, the Project would not substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment) as access locations for future development would be designed to the City's standards and would provide adequate sight distance. In addition, policies included in the proposed General Plan update that promote bicycle and pedestrian safety would help identify and address potential safety concerns. Therefore, this impact would be less than significant.

Access locations for future development under Alternative 2 would also be designed to the City's standards and would provide adequate sight distance. In addition, development under the Corridors Alternative would also adhere to policies included in the proposed General Plan update that promote bicycle and pedestrian safety. As a result, the impact with respect to design hazards would remain less than significant, similar to the Project, and the severity of this impact would be similar.

Emergency Access

As discussed in Section 3.15, *Transportation*, of the Draft EIR, the Project would not result in inadequate emergency access as future development would be compliant with the City's design guidelines that incorporate safety and emergency access needs, where applicable. As a result, this impact would be less than significant.

Future development under Alternative 2 would also not result in inadequate emergency access for the same reason as the Project. Therefore, the impact with respect to emergency access would remain less than significant, similar to the Project, and the severity of this impact would be similar.

Tribal Cultural Resources

As discussed in Section 3.16, *Tribal Cultural Resources*, of the Draft EIR, the Project would not cause a substantial adverse change in the significance of a tribal cultural resource as no tribal cultural resources were identified within or adjacent to the Planning Area. However, given the historic occupation of the area, it is possible that future development within the Planning Area may result in the identification of unrecorded tribal cultural resources. However, future projects would be required to comply with the provisions of SB 18 and AB 52 to incorporate tribal consultation into the CEQA process to ensure that tribal cultural resources are properly identified and that mitigation measures are identified to reduce impacts on these resources. As a result, this impact would be less than significant.

Future development under Alternative 2 would also not cause a substantial adverse change in the significance of a tribal cultural resource for the same reason as the Project. Therefore, the impact

with respect to tribal cultural resources would remain less than significant, similar to the Project, and the severity of this impact would be similar.

Utilities and Service Systems

New or Expanded Facilities

As discussed in Section 3.17, *Utilities and Service Systems*, of the Draft EIR, the Project would not require or result in the relocation or construction of new or expanded water and wastewater treatment facilities as all facilities serving the city have sufficient remaining capacity to serve anticipated growth within the Planning Area. In addition, policies included in the proposed General Plan update aim to conserve water by curbing demand and ensuring that the planning water infrastructure is coordinated, thus reducing demand on existing water and wastewater treatment infrastructure. However, the Project could require or result in the relocation or construction of new or expanded stormwater drainage, electric power, natural gas, and telecommunications facilities, and should upgrades to new facilities be required, the construction of those facilities could result in adverse environmental effects, which are considered throughout the technical sections of this Draft EIR. In addition, future facilities would be required to comply with the City's requirements for construction projects, including but not limited to, grading permits and encroachment permits. As a result, this impact would be less than significant.

As less growth would occur under Alternative 2 compared to the Project, less water and wastewater treatment would be required under the Corridors Alternative. As the water and wastewater treatment facilities serving the city have sufficient remaining capacity to serve anticipated growth within the Planning Area under the Project, sufficient capacity also exists to treat water and wastewater generated by growth anticipated under the Corridors Alternative. In addition, development under Alternative 2 would adhere to the existing General Plan policies that would aim to conserve water. Finally, development allowed under the Corridors Alternative could also require or result in the relocation or construction of new or expanded stormwater drainage, electric power, natural gas, and telecommunications facilities, but not to the same degree as less development would occur under the existing General Plan. Should upgrades to new facilities be required under this alternative, the construction of those facilities could result in adverse environmental effects, which are considered throughout the technical sections of this Draft EIR. In addition, future facilities under the Corridors Alternative would also be required to comply with the City's requirements for construction projects, including but not limited to, grading permits and encroachment permits. For the reasons, the impact with respect to new or expanded water, wastewater, stormwater drainage, electric power, natural gas, and telecommunications facilities would remain less than significant, similar to the Project, although the severity of this impact would be less as there would be less demand for these facilities under Alternative 2 compared to the Project.

Water Supply

As discussed in Section 3.17, *Utilities and Service Systems*, of the Draft EIR, sufficient water supplies are available to serve the Project, as well as reasonably foreseeable future development, during normal, dry and multiple dry years as the city's water service providers have indicated that they have reliable supplies to meet anticipated demand under each of these scenarios. In addition, each individual development proposal would be required to address water supply as part of the

CEQA process. Next, future development allowed under the Project would adhere to state and local regulations that promote water conservation and policies in the proposed General Plan update that update aim to conserve water by curbing demand for domestic and commercial purposes and promoting water conservation strategies, thus reducing demand for water. Finally, the water suppliers serving the City have water contingency plans that would be implemented in case of a water shortage event or drought. For these reasons, this impact would be less than significant.

As less growth would occur under Alternative 2 compared to the Project, demand for water would be less under the Corridors Alternative. As the city's water service providers have indicated that they have reliable supplies to meet anticipated demand under the Project, sufficient water supplies also exist to serve growth anticipated under the Corridors Alternative. In addition, each individual development proposal under this alternative would also be required to address water supply as part of the CEQA process. Next, future development under Alternative 2 would continue to adhere to state and local regulations that promote water conservation and proposed General Plan policies that aim to conserve water. Finally, the water suppliers serving the City have water contingency plans that would be implemented in case of a water shortage event or drought. Therefore, the impact with respect to water supply would remain less than significant, similar to the Project, although the severity of this impact would be less as there would be less demand for water under Alternative 2 compared to the Project.

Wastewater Service Capacity

As discussed in Section 3.17, *Utilities and Service Systems*, of the Draft EIR, the Project would not result in a determination by the wastewater treatment provider which serves or may serve the project that it has inadequate capacity to serve the project's projected demand in addition to the provider's existing commitments as the wastewater treatment plant serving the Planning Area has sufficient remaining capacity to treat the full increase in sewage attributable to future growth anticipated under the proposed General Plan update. In addition, policies in the proposed General Plan update aim to conserve water by curbing demand for domestic and commercial purposes and promoting water conservation strategies, thus reducing demand for water, and in turn, the generation of wastewater. For these reasons, this impact would be less than significant.

As less growth would occur under Alternative 2 compared to the Project, less wastewater would be generated under the Corridors Alternative. As the wastewater treatment plant serving the Planning Area has sufficient remaining capacity to treat the full increase in sewage attributable to the Project, sufficient capacity also exists to treat wastewater generated by growth anticipated under the Corridors Alternative. In addition, future development under Alternative 2 would continue to adhere to proposed General Plan policies that aim to conserve water, which and in turn, would reduce the amount of wastewater generated. As a result, the impact with respect to wastewater service capacity would remain less than significant, similar to the Project, although the severity of this impact would be less as there would be less wastewater generated under Alternative 2 compared to the Project.

Solid Waste

As discussed in Section 3.17, *Utilities and Service Systems*, of the Draft EIR, the Project would not generate solid waste in excess of state or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals as the landfills that currently serve the city have adequate capacity to dispose of the full increase in solid waste attributable to future growth anticipated under the proposed General Plan update. In addition, compliance with existing solid waste regulations and policies in the proposed General Plan update would further address potential impacts. Therefore, this impact would be less than significant.

As less growth would occur under Alternative 2 compared to the Project, less solid waste would be generated under the Corridors Alternative. As the landfills currently serving the Planning Area have adequate capacity to dispose of the full increase in solid waste attributable to Project, sufficient capacity also exists to treat solid waste generated by growth anticipated under Alternative 2. In addition, future development under Alternative 2 would continue to adhere to existing solid waste regulations and proposed General Plan policies that aim to reduce solid waste. As a result, the impact with respect to solid waste disposal capacity would remain less than significant, similar to the Project, although the severity of this impact would be less as there would be less solid waste generated under Alternative 2 compared to the Project.

Solid Waste Regulations

As discussed in Section 3.17, *Utilities and Service Systems*, of the Draft EIR, the Project would comply with federal, state, and local management and reduction statutes and regulations related to solid waste. In addition, the policies in the proposed General Plan update regarding solid waste disposal and associated public facilities would further ensure compliance with applicable regulations. As a result, this impact would be less than significant.

Development allowed under Alternative 2 would also comply with federal, state, and local management and reduction statutes and regulations related to solid waste. In addition, future development under Alternative 2 would continue to adhere to proposed General Plan policies that aim to reduce solid waste. As a result, the impact with respect to solid waste regulations would remain less than significant, similar to the Project, although the severity of this impact would be less as there would be less solid waste generated under Alternative 2 compared to the Project.

Relationship of the Alternative to the Project Objectives

The primary objective of the Project is to foster a vibrant and sustainable community, respond to an increasingly diverse and aging population, and address a myriad of physical, environmental, and other challenges that the city faces. Alternative 2 would achieve all of the objectives for the Project, although to a lesser degree. For example, the Corridors Alternative would not meet future needs based on the projected population and job growth to the same degree as the Project nor would it reduce community-wide GHG emissions consistent with statewide targets to the same degree as the Project.

4.7 Environmentally Superior Alternative

Section 15126.6(e)(2) of the State CEQA Guidelines indicates that an analysis of alternatives to a proposed project shall identify an environmentally superior alternative among the alternatives evaluated in an EIR and that if the “no project” alternative is the environmentally superior alternative, the EIR shall identify another environmentally superior alternative among the remaining alternatives.

With respect to identifying an Environmentally Superior Alternative among those analyzed in this EIR, the range of feasible Alternatives includes Alternative 1 – No Project Alternative and Alternative 2 – Corridors Alternative. A comparative summary of the environmental impacts of the Project and of each of these alternatives is provided in **Table 4-2, Comparison of Impacts of the Project and Alternatives**. As shown in Table 4-2, the environmental impacts for each alternative are as follows:

- Alternative 1 would, in comparison to the Project, result in reduced environmental impacts related to air quality, cultural resources, GHG emissions (operational), noise and vibration (operational), population and housing, public services, VMT, and utilities, but would result in greater impacts with respect to aesthetics, biological resources, energy (operational), land use planning, and recreation.
- Alternative 2 would, in comparison to the Project, result in reduced environmental impacts related to air quality, cultural resources, energy (operational), GHG emissions (operational), noise and vibration (operational), population and housing, public services, VMT, and utilities, but would result in greater impacts with respect to land use planning and recreation.

Therefore, of the alternatives analyzed in the EIR, Alternative 2 is considered the environmentally superior alternative.

According to Section 15126.6(a) of the State CEQA Guidelines, the purpose of an Alternatives analyses is to identify alternative developments that would feasibly attain most of the basic objectives of the project but that would avoid or substantially lessen any of the significant effects of the project. Neither Alternative 1 nor Alternative 2 would avoid the Project’s potentially significant and unavoidable with respect to air quality, historical resources, and VMT. On the contrary, both Alternative 1 and Alternative 2 would result in an additional significant and unavoidable impact with respect to the deterioration of recreational facilities as not enough parkland would be provided by these alternatives to meet demand. However, Alternative 2 would achieve all of the objectives for the Project, although not to the same degree, while Alternative 1 would either not meet or only partially meet the objectives for the Project.

TABLE 4-2
COMPARISON OF IMPACTS OF THE PROJECT AND ALTERNATIVES

Impact	Project	Alternative 1: No Project	Alternative 2: Corridors Alternative
Aesthetics			
AES-1: The Project would not have a substantial adverse effect on a scenic vista.	LTS	LTS+	LTS=
AES-2: The Project would not substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway.	NI	NI=	NI=
AES-3: The Project would not result in development that would conflict with applicable zoning and other regulations governing scenic quality.	LTS	LTS+	LTS=
AES-4: The Project would not create a new source of substantial light or glare that would adversely affect day or nighttime views in the area.	LTS	LTS=	LTS=
Air Quality			
AQ-1: The Project would not conflict with or obstruct implementation of the applicable air quality plan.	LTS	LTS=	LTS=
AQ-2: The Project would 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.	SU	SU-	SU-
AQ-3: The Project would expose sensitive receptors to substantial pollutant concentrations.	SU	SU=	SU=
AQ-4: The Project would result in other emissions (such as those leading to odors) affecting a substantial number of people.	SU	SU=	SU=
Biological Resources			
BIO-1: The Project would not have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by the CDFW or USFWS.	LTS	LTS+	LTS=
BIO-2: The Project would not have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, or regulations or by the CDFW or USFWS.	LTS	LTS+	LTS=
BIO-3: The Project would not have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marsh, vernal pools, coastal saltmarsh, etc.) through direct removal, filling, hydrological interruption, or other means.	NI	NI=	NI=
BIO-4: The Project would not 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	LTS	LTS+	LTS=
BIO-5: The Project would not conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance.	NI	NI=	NI=

Impact	Project	Alternative 1: No Project	Alternative 2: Corridors Alternative
BIO-6: The Project would not conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan.	NI	NI=	NI=
Cultural Resources			
CUL-1: The Project would cause a substantial adverse change in the significance of a historical resource pursuant to §15064.5.	SU	SU-	SU-
CUL-2: The Project would not cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5.	LTS	LTS-	LTS-
CUL-3: The Project would not disturb any human remains, including those interred outside of formal cemeteries.	LTS	LTS-	LTS-
Energy			
ENG-1: The Project would not result in a potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources.	LTS	LTS=/+	LTS-
ENG-2: The Project would not conflict with or obstruct a state or local plan for renewable energy or energy efficiency.	LTS	LTS+	LTS=
Geology and Soils			
GEO-1: The Project would not directly or indirectly cause potential substantial adverse effects involving the risk of geologic hazards.	LTS	LTS=	LTS=
GEO-2: The Project would not result in substantial soil erosion or the loss of topsoil.	LTS	LTS=	LTS=
GEO-3: The Project would not have a significant impact due to hazards associated with unstable soils, such as on- or off-site landslide, lateral spreading, subsidence, liquefaction, or collapse.	LTS	LTS=	LTS=
GEO-4: The Project would not create substantial direct or indirect risks to life or property due to the presence of expansive soils.	LTS	LTS=	LTS=
GEO-5: The Project would not directly or indirectly destroy a unique paleontological resource or site or unique geologic feature.	LTS	LTS=	LTS=
Greenhouse Gas Emissions			
GHG-1: The Project would not generate GHG emissions, either directly or indirectly, that may have a significant impact on the environment.	LTS	LTS=-/	LTS=-/
GHG-2: The Project would not conflict with any applicable plan, policy or regulation adopted for the purpose of reducing the emissions of GHGs.	LTS	LTS+	LTS=

Impact	Project	Alternative 1: No Project	Alternative 2: Corridors Alternative
Hazards and Hazardous Materials			
HAZ-1: The Project would not create a significant hazard to the public or the environment through the routine use, transport, disposal, or accidental release of hazardous materials.	LTS	LTS=	LTS=
HAZ-2: The Project would not result in hazardous emissions or the handling of hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school.	LTS	LTS=	LTS=
HAZ-3: The Project would not create a significant hazard to the public or environment from a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5.	LTS	LTS=	LTS=
HAZ-4: The Project would not be located within an airport land use plan or, where such plan has not been adopted, within two miles of a public airport or public use airport.	LTS	LTS=	LTS=
HAZ-5: The Project would not impair implementation of or interfere with an adopted emergency response plan or emergency evacuation plan.	LTS	LTS=	LTS=
HAZ-6: The Project would not expose people or structures, either directly or indirectly, to a significant risk of loss, injury, or death involving wildland fires.	NI	NI=	NI=
Hydrology and Water Quality			
HYD-1: The Project would not violate any water quality standards or waste discharge requirements or otherwise substantially degrade water quality.	LTS	LTS=	LTS=
HYD-2: The Project would not substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level.	LTS	LTS=	LTS=
HYD-3: The Project would not substantially alter the existing drainage pattern of the site or area in a manner that would result in substantial erosion or siltation on- or off-site; substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or offsite, create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff; and impede or redirect flood flows	LTS	LTS=	LTS=
HYD-4: The Project would not risk release of pollutants due to project inundation.	LTS	LTS=	LTS=
HYD-5: The Project would not conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan.	LTS	LTS=	LTS=
Land Use and Planning			
LU-1: The Project would not physically divide an established community.	LTS	LTS+	LTS=
LU-2: The Project would not cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect.	LTS	LTS+	LTS+

Impact	Project	Alternative 1: No Project	Alternative 2: Corridors Alternative
Noise			
NOI-1: The Project would not result in the generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies.	LTS	LTS=-	LTS=-
NOI-2: The Project would not generate excessive groundborne vibration or groundborne noise.	LTS	LTS=-	LTS=-
NOI-3: The Project would not expose people residing or working in the project area to excessive noise levels generated by aircraft.	LTS	LTS=	LTS=
Population and Housing			
POP-1: The Project would not induce substantial unplanned population growth in an area, directly nor indirectly.	LTS	LTS-	LTS-
POP-2: The Project would not displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere.	LTS	LTS-	LTS-
Public Services			
PUB-1: The Project would not result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public service: (i) fire protection, (ii) police protection, (iii) schools, (iv) parks, (v) other public facilities.	LTS	LTS-	LTS-
Recreation			
REC-1: The Project would not increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated.	LTS	SU+	SU+
REC-2: The Project would not have a significant impact due to inclusion of recreational facilities or required construction or expansion of recreational facilities which might have an adverse physical effect on the environment.	LTS	LTS=	LTS=
Transportation			
TR-1: The Project would not conflict with a program, plan, ordinance or policy addressing the circulation system, including transit, roadway bicycle and pedestrian facilities.	LTS	LTS=	LTS=
TR-2: The Project would conflict or be inconsistent with CEQA Guidelines Section 15064.3, Subdivision (b).	SU	SU-	SU-
TR-3: The Project would not substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment).	LTS	LTS=	LTS=
TR-4: The Project would not result in inadequate emergency access.	LTS	LTS=	LTS=

Impact	Project	Alternative 1: No Project	Alternative 2: Corridors Alternative
Tribal Cultural Resources			
TCR-1: The Project would not cause a substantial adverse change in the significance of a tribal cultural resource.	LTS	LTS=	LTS=
Utilities and Service Systems			
UTL-1: While the Project would not require or result in the relocation or construction of new or expanded water and wastewater treatment facilities, it could require or result in the relocation or construction of new or expanded stormwater drainage, electric power, natural gas, and telecommunications facilities. However, the construction or relocation of these facilities would not cause significant environmental effects.	LTS	LTS-	LTS-
UTL-2: Sufficient water supplies are available to serve future development allowed by the Project and reasonably foreseeable future development during normal, dry and multiple dry years.	LTS	LTS-	LTS-
UTL-3: The Project would not result in a determination by the wastewater treatment provider which serves or may serve the project that it has inadequate capacity to serve the Project's projected demand in addition to the provider's existing commitments.	LTS	LTS-	LTS-
UTL-4: The Project would not generate solid waste in excess of state or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals.	LTS	LTS-	LTS-
UTL-5: The Project would comply with federal, state, and local management and reduction statutes and regulations related to solid waste.	LTS	LTS-	LTS-

NOTES: NI – No Impact; LTS – Less than Significant; SU - Significant and Unavoidable; = - Similar Impact; - - Reduced Impact; + - Greater Impact

CHAPTER 5

Other CEQA Considerations

This chapter addresses environmental topics required by the California Environmental Quality Act (CEQA) that are not covered within the other chapters of this Environmental Impact Report (EIR), including: environmental effects found not to be significant, significant and unavoidable impacts, significant irreversible environmental changes, and growth-inducing impacts. In addition, the reasons the Carson 2040 General Plan Update (Project) is being proposed in spite of its potentially significant unavoidable impacts are also addressed.

5.1 Effects Found Not to Be Significant

State CEQA Guidelines Section 15128 requires that an EIR “contain a statement briefly indicating the reasons that various possible significant effects of a project were determined not to be significant and therefore were not discussed in detail in the EIR.” Chapter 3, *Environmental Setting, Impacts, and Mitigation Measures*, of this Draft EIR discusses all potential impacts, regardless of their magnitude in all issue areas except agriculture and forest resources, geology and soils (septic tanks or alternative waste water disposal systems), mineral resources, and wildfire, which were determined to have negligible or no impacts based on the nature of the Project. This section discusses those issue areas that were determined not to require further analysis in this Draft EIR.

5.1.1 Agricultural and Forest Resources

- a) **Would the project convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?**

The Farmland Mapping and Monitoring Program (FMMP) designates some areas within the City of Carson as Unique Farmland.¹ These areas are mostly occupied by nurseries. Under the Project, new development would occur in City’s central Core, and land designated as Unique farmland would retain its existing use. Therefore, conversion of farmland to non-agricultural uses would not occur with implementation of the proposed General Plan update. No Project-specific and cumulative impacts would occur.

¹ California Department of Conservation, 2021. California Important Farmland Finder. Available: <https://maps.conservation.ca.gov/DLRP/CIFF/>. Accessed October 20, 2021.

b) Would project conflict with existing zoning for agricultural use, or a Williamson Act contract?

There are approximately 62 acres of property which are under agricultural production in the City.² Agricultural uses in the City are generally located in open space and residential zones. The City does not have zoning exclusive to agriculture. Therefore, no zoning for agricultural use would be at risk for conversion and no conflicts would exist with any Williamson Act contracts due to implementation of the Project. No Project-specific and cumulative impacts would occur.

c) Would the project conflict with existing zoning for, or cause rezoning of, forestland (as defined in Public Resources Code Section 12220(g)), timberland (as defined by Public Resources Code Section 4526), or timberland zoned Timberland Production (as defined by Government Code Section 51104(g))?

No forestlands, timberlands, or timberlands zoned Timberland Production occur in the Planning Area and, therefore, no Project-specific or cumulative impacts to such resources would occur.

d) Would the project result in the loss of forestland or conversion of forestland to non-forest uses?

As described above, no forestlands are located in the Planning Area that could be affected by the Project. No Project-specific and cumulative impacts would occur.

e) Would the project involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland to non-agricultural use or conversion of forestland to non-forest use?

As described previously, the City has approximately 62 acres of farmland within the City. However, the land is not specifically zoned for agricultural uses. No Project-specific and cumulative impacts would occur.

5.1.2 Geology and Soils

a) Would the project have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water?

The entirety of the City of Carson is served by established wastewater conveyance and treatment services. Development allowed under the Project would connect to existing sewer trunk lines or future expansion of sewer trunk lines, and thus would not require the use of septic tanks or alternative wastewater systems. No Project-specific and cumulative impacts would occur.

² City of Carson, 2004. City of Carson General Plan. Open Space Element.

5.1.3 Mineral Resources

- a) **Would the project result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?**

Portions of the City are located within the Dominguez and Wilmington Oil Fields.³ As a result, there are large areas of the City devoted to the management and production of oil and petroleum products. The Project would focus development in the City's Central Core and would not otherwise affect heavy industrial areas in the City which are dedicated to oil and petroleum production. No Project-specific and cumulative impacts would occur.

- b) **Would the project result in the loss of availability of a locally-important mineral resource recovery site delineated on a local general plan, specific plan, or other land use plan?**

As described above, there are large areas of the City of Carson devoted to the management and production of oil and petroleum products. However, implementation of the Project would not affect areas which are dedicated to oil and petroleum production. No Project-specific or cumulative impacts would occur.

5.1.4 Wildfire

If located in or near state responsibility areas or lands classified as very high fire hazard severity zones, would the project:

- a) **Substantially impair an adopted emergency response plan or emergency evacuation plan?**
- b) **Due to slope, prevailing winds, and other factors, exacerbate wildfire risk, and thereby expose project occupants to, pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire?**
- c) **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?**
- d) **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?**

California Department of Forestry and Fire Protection (CAL FIRE) provides maps of the State Responsibility Area (SRA) Fire Hazard Severity Zones (FHSZs), or areas of significant fire hazard, based on fuels, terrain, weather, and the likelihood of buildings igniting. CAL FIRE Zones are designated with Very High, High, Moderate, and Other which includes Non-

³ City of Carson, 2004. City of Carson General Plan. Open Space Element.

Wildland/Urban and Urban Unzoned hazard classes. The goal of this mapping effort is to create more accurate fire hazard zone designations such that mitigation strategies are implemented in areas where hazards warrant these investments. The fire hazard zones will provide specific designation for application of defensible space and building standards consistent with known mechanisms of fire risk to people, property, and natural resources.

The Planning Area is not located within or near an SRA nor is it classified as a very high fire hazard severity zone (VHFHSZ) or located near a VHFHSZ.⁴ The Planning Area is located within a Local Responsibility Area (LRA) in a highly urbanized environment that is far from areas with high wildfire risk. Therefore, wildfire risk in the Planning Area is negligible. No Project-specific or cumulative impacts would occur.

5.2 Significant and Unavoidable Impacts

State CEQA Guidelines Section 15126 requires that an EIR describe any significant impacts that cannot be avoided, even with implementation of feasible mitigation measures. Chapter 3, *Environmental Setting, Impacts, and Mitigation Measures*, of this Draft EIR provides a description of the potential environmental effects of the proposed General Plan update and recommends policies and mitigation measures to reduce impacts to a less than significant level, where feasible. After implementation of the recommended policies and mitigation measures, most impacts associated with the Project would be reduced to a less than significant level. However, the impacts listed below could not be feasibly mitigated and would result in a significant and unavoidable impact.

5.2.1 Air Quality

Impact AQ-2: The Project would 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.

The Project could result in a cumulatively considerable net increase of criteria pollutants for which the project region is non-attainment as the construction and operation of individual future projects would generate emissions of criteria pollutants that could exceed regional significance thresholds. Even with the implementation of project specific mitigation measures (MM AQ-1 and MM AQ-5), this impact would not be reduced to a less-than-significant level. As a result, this impact would be significant and unavoidable.

Impact AQ-3: The Project would expose sensitive receptors to substantial pollutant concentrations.

The Project could expose sensitive receptors to substantial pollutant concentrations as the construction and operation of individual future projects would generate emissions of NO_x, CO, PM₁₀, and PM_{2.5} that could exceed localized significance thresholds (LST) established by the SCAQMD. In addition, the construction and operation of individual future projects could expose

⁴ California Department of Forestry and Fire Protection, 2007. Fire Hazard Severity Zones in SRA – Los Angeles County. Available: https://osfm.fire.ca.gov/media/6705/fhszs_map19.pdf. Accessed October 20, 2021.

nearby sensitive receptors to levels of toxic air contaminants that could result in a potential increase in cancer, acute, and/or chronic risk. Even with the implementation of project specific mitigation measures (MM AQ-6 and MM AQ-7), this impact would not be reduced to a less-than-significant level. As a result, this impact would be significant and unavoidable.

Impact AQ-4: The Project would result in other emissions (such as those leading to odors) affecting a substantial number of people.

The Project could result in odors affecting a substantial number of people during both construction and operation as it is possible that some future development allowed under the proposed General Plan update could be large enough in scale and/or intensity such that substantial odors are generated. Therefore, project-related construction activities could result in a significant and unavoidable impact with respect for odors.

5.2.2 Cultural Resources

Impact CUL-1: The Project would cause a substantial adverse change in the significance of a historical resource pursuant to §15064.5.

The Project could cause a substantial adverse change in the significance of a historical resource pursuant to §15064.5. Even with adherence to proposed General Plan policies related to the protection of cultural resources and implementation of MM CUL-1, this impact would not be reduced to a less-than-significant level. As a result, this impact would be significant and unavoidable.

5.2.3 Transportation

Impact TR-2: The Project would conflict or be inconsistent with State CEQA Guidelines Section 15064.3, Subdivision (b).

The Project would conflict or be inconsistent with State CEQA Guidelines Section 15064.3, Subdivision (b) as Total VMT per Service Population associated with growth under the proposed General Plan update would not achieve a 15 percent or more reduction compared to the baseline. Although policies promoting a reduction of VMT per capita are included in the proposed General Plan update, no feasible mitigation is available to reach the 15 percent or more reduction threshold. As a result, this impact would be significant and unavoidable.

5.3 Reasons the Project is Being Proposed Notwithstanding its Significant Unavoidable Impacts

In addition to identification of the Project's significant unavoidable impacts, Section 15126.2(c) of the State CEQA Guidelines requires a description of the reasons why a Project is being proposed, notwithstanding significant unavoidable impacts associated with the Project. As discussed above, the Project would result in significant and unavoidable impacts with respect to

air quality, historical resources, and transportation. Despite these impacts, the Project would achieve the following benefits:

- The proposed General Plan update will provide for the orderly build-out of new development; residential units of varying densities; mixed-use development; retail, office, and industrial uses; public lands; and parks, open space, and recreational facilities;
- The proposed General Plan update implements principles of sustainable growth by concentrating new urban development in the City’s core, areas around the core, and along key commercial and transportation corridors; thereby minimizing land consumption while maintaining open space, habitat, and recreation uses throughout the Planning Area;
- The proposed General Plan update will create a safe, efficient, and balanced transportation network throughout the Planning Area, providing links within the City and with the neighboring South Bay region, and accommodating automobile, truck, pedestrian, recreational, rail, and public transit needs which will meet current and future development requirements within the Planning Area;
- The proposed General Plan update improves mobility options through the development of a multi-modal transportation network that enhances connectivity, supports community development patterns, limits traffic congestion, promotes public and alternative transportation methods, and supports the goals of the adopted regional transportation plan;
- The proposed General Plan update addresses adverse environmental effects associated with global climate change by facilitating sustainable development, promoting energy efficiency, and promoting development that reduces greenhouse gas emissions;
- The proposed General Plan update encourages the development of a variety of housing types that are needed to meet the needs of all of Carson’s residents, to meet its fair share housing allocation without dividing established communities, and to be consistent with the recently adopted 2021-2029 Housing Element; and
- The proposed General Plan update will promote and support economic development to provide jobs in concert with future population growth.

5.4 Significant Irreversible Environmental Changes

According to Section 15126.2(d) of the State CEQA Guidelines, an EIR is required to address any significant irreversible environmental changes that would occur should the proposed project be implemented. As stated in State CEQA Guidelines Section 15126.2(d):

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 likely. 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. Irrecoverable commitments of resources should be evaluated to assure that such current consumption is justified.

The Project would allow for future development that would necessarily consume limited, slowly renewable and non-renewable resources. This consumption would occur during the construction

phase of individual projects allow under the proposed General Plan update and would continue throughout their operational lifetime. Development of individual projects allow under the Project would require a commitment of resources that would include: (1) building materials, (2) fuel and operational materials/resources, and (3) the transportation of goods and people to and from the project sites. Construction of individual projects would require the consumption of resources that are non-replenishable or may renew so slowly as to be considered non-renewable. These resources would include the following construction supplies: certain types of lumber and other forest products; aggregate materials used in concrete and asphalt such as sand, gravel, and stone; metals such as steel, copper, and lead; petrochemical construction materials such as plastics; and water. Furthermore, nonrenewable fossil fuels such as gasoline and oil would also be consumed in the use of construction vehicles and equipment, as well as the transportation of goods and people to and from the project sites.

Ongoing operation of individual projects allowed under the Project would entail a further commitment of energy resources in the form of petroleum products, natural gas, electricity, and water. Long-term impacts would also result from an increase in vehicular traffic, and the associated air pollutant and noise emissions. This commitment of resources would be a long-term obligation in view of the fact that, practically speaking, it would not be possible to return developed land to its original condition.

5.5 Growth-Inducing Impacts

State CEQA Guidelines Section 15126.2(e) requires a discussion of a proposed project's potential to foster economic or population growth, or the construction of additional housing, either directly or indirectly, in the surrounding environment. This includes consideration of projects that would remove obstacles to population growth. Growth does not necessarily create significant physical changes to the environment. However, depending upon the type, magnitude, and location of growth, it can result in significant adverse environmental effects. Under CEQA, growth is not to be considered necessarily detrimental, beneficial, or of significant consequence. Induced growth is considered a significant impact only if it can be demonstrated that the potential growth, in some other way, significantly affects the environment. In general, a project may foster physical, economic, or population growth in a geographic area if it meets any one of the criteria identified below:

- The project results in the urbanization of land in a remote location (leapfrog development);
- The project removes an impediment to growth (e.g., the establishment of an essential public service, or the provision of new access to an area);
- The project establishes a precedent-setting action that could lead to physical adverse changes in the environment (e.g., a change in zoning or general plan amendment approval);
- Economic expansion or growth occurs in an area in response to the project (e.g., changes in revenue base, employment expansion, etc.).

If a project meets any one of these criteria, it may be considered growth inducing. Generally, growth-inducing projects are either located in isolated, undeveloped, or underdeveloped areas,

necessitating the extension of major infrastructure, such as sewer and water facilities or roadways, or encourage premature or unplanned growth.

5.5.1 Population and Housing Growth

As discussed in Section 3.12, *Population and Housing*, of this Draft EIR, the State Department of Finance estimated the City of Carson's 2020 population to be 93,100. As part of the General Plan update process, the City projects its 2040 population to be 136,600, which translates to a 46.7 percent increase in growth over the next 20 years. Section 3.12 further states that although the Project does not anticipate major land use changes in the City of Carson's Sphere of Influence (SOI), proportional population growth in the SOI is projected to result in a 2040 population of about 5,100, bringing the total projected 2040 Planning Area population to about 141,700 residents. These projected increases in population are anticipated to occur due the proposed General Plan update's focus on infill development. It should be noted that the proposed General Plan update is accommodating continued growth anticipated in the Planning Area, and is not necessarily inducing growth.

Since the potential growth in the City under the Project consists of infill development and new mixed-use opportunities along corridors and in the downtown Core area, the proposed General Plan update would not result in urbanization of land in remote locations. Development under the Project would focus on redevelopment and revitalization of areas already served by infrastructure and would not require extensions utilities, roads, or other infrastructure. As no new major roads or highways have been proposed to provide new access to the City, the proposed General Plan update would not remove an impediment to growth. Instead, proposed development under the Project would accommodate growth that will occur in the Southern California Region, as anticipated by SCAG projections for the City in the next 20 years. Therefore, the proposed General Plan update would not be growth inducing or set new precedent for growth, but would involve development in anticipation of expected growth in the City.

5.5.2 Removal of Obstacles to Population Growth

The Project encourages the reuse and intensification of previously developed areas of the City rather than the extension of urban development into undeveloped areas of the City. Development under the proposed General Plan update would occur for areas of the city that are developed and are served by an extensive network of electricity, water, sewer, storm drain, roadways, and other infrastructure sized to accommodate or allow for existing and planned growth. Only minor connections would be needed to accommodate new development under the Project. As described above, since no new major roads or highways would be implemented to provide new access to the City, the proposed General Plan update would not facilitate development in any undeveloped areas where development could not already occur under existing City plans or ordinances. Instead, the Project focuses on infill development and mixed-use opportunities to provide higher density housing near jobs and community-serving retail and services. Therefore, the proposed General Plan update would not result in the removal of obstacles to growth that would result in growth-inducing development.

5.5.3 Employment Growth

Implementation of the Project would generate short-term employment opportunities during construction activities associated with future development. The proposed General Plan update would not be considered growth inducing as future development under the Project would draw from the existing supply of construction workers in the Southern California workforce.

Implementation of the Project would contribute to permanent employment opportunities at business developments created in Core areas, along corridors, and other large opportunity sites within the City. Potential full-time and part-time positions are anticipated to be filled by the local labor force. The jobs associated with the proposed development could attract new residents to the City. However, the City of Carson has an existing employment base from which to pull employees. Further, the economic expansion that would occur in association with these future developments is accounted for in the proposed General Plan update and is anticipated by the City. Therefore, impacts related to employment growth are not considered growth inducing.

5.5.4 Precedent-Setting Policies

The purpose of the Project is to preserve and enhance the character of the City of Carson and to establish long-range development policies that will guide future decision-making. Therefore, by its nature, the proposed General Plan update is designed to reduce the potential for uncontrolled growth and associated environmental impacts.

As described throughout this section, the anticipated growth under the Project would primarily consist of infill development and new mixed-use opportunities in Core areas, along corridors, and large opportunity sites within the City, and would not result in the urbanization of land in remote locations. New development in the City would serve to accommodate imminent future growth in the Southern California Region, as captured by SCAG projections for the City in the next 20 years. A general plan is a regulatory document that plans for future growth and guides development. As such, the proposed General Plan update would accommodate for future growth and would reduce the potential for uncontrolled growth. Future, unanticipated actions such as General plan amendments or changes to the zoning of individual properties are in direct contrast to the General Plan update process. Therefore, by accommodating growth that is already projected by SCAG, the Project would not be growth inducing or precedent setting.

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CHAPTER 6

References

Executive Summary

No references cited in this chapter.

Chapter 1, Introduction

No references cited in this chapter.

Chapter 2, Project Description

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Section 3.1, Aesthetics

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