ADDENDUM TO THE
CARSON 2040 GENERAL PLAN UPDATE EIR

Carson Triangle Project

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October 2024

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ATTACHMENTS

A. Air Quality Report
B. GHG Emissions Report
C. Noise Report
D. Vibration Report
E. Traffic Memo

1 INTRODUCTION

This document is an Addendum to the Environmental Impact Report (EIR) prepared for the Carson 2040 General Plan Update (General Plan Update) (State Clearinghouse No. 2001091120, December 2022), which was certified by the City of Carson (City) on April 4, 2023 (Certified EIR). The Certified EIR may be viewed at the following link: https://www.carson2040.com/. In accordance with the California Environmental Quality Act (CEQA), this Addendum to the Certified EIR analyzes a proposed residential development project on a site analyzed as part of the General Plan Update (the Modified Project) and demonstrates that the Modified Project does not present any of the circumstances requiring the preparation of a Supplemental or Subsequent EIR pursuant to Public Resources Code, Section 21166 or CEQA Guidelines Section 15162 and 15163.

1.1 BACKGROUND

The City prepared an EIR pursuant to the CEQA for the General Plan Update to assess potential environmental impacts of the General Plan Update. The EIR concluded that, with mitigation, all of the environmental impacts of the General Plan Update would be less than significant, with the exception of a significant and unavoidable environmental impacts related to Air Quality, Cultural Resources (Historic), and Transportation (VMT).

In April 2023, the City certified the EIR and approved the General Plan Update. Subsequent to approval of the General Plan Update, the Applicant of the Carson Triangle Project has proposed a residential development project on a site analyzed as part of the General Plan Update (Modified Project).

Both the Approved General Plan Update (as analyzed in the Certified EIR) and the Modified Project (analyzed in this Addendum) are discussed further below.

1.2 CEQA AUTHORITY FOR AN ADDENDUM

CEQA establishes the type of environmental documentation required when changes to a project occur after an EIR is certified. Specifically, Section 15164(a) of the CEQA Guidelines states that:

> *The lead agency or responsible agency shall prepare an addendum to a previously certified EIR if some changes or additions are necessary but none of the conditions described in Section 15162 calling for preparation of a subsequent EIR have occurred.*

CEQA Guidelines Section 15162 requires the preparation of a Subsequent EIR when an EIR has been certified or a negative declaration has been adopted for a project and one or more of the following circumstances exist:

> *(1) Substantial changes are proposed in the project which, will require major revisions of the previous EIR or negative declaration due to the involvement of new*

significant environmental effects or a substantial increase in the severity of previously identified significant effects;

(2) Substantial changes occur with respect to the circumstances under which the project is undertaken, which will require major revisions of the previous EIR or negative declaration due to the involvement of new significant environmental effects or a substantial increase in the severity of previously identified significant effects; or

(3) New information of substantial importance, which was not known and could not have been known with the exercise of reasonable diligence at the time the previous EIR was certified as complete or the negative declaration was adopted, shows any of the following:

(A) The project will have one or more significant effects not discussed in the previous EIR or negative declaration;

(B) Significant effects previously examined will be substantially more severe than shown in the previous EIR;

(C) Mitigation measures or alternatives previously found not to be feasible would in fact be feasible, and would substantially reduce one or more significant effects of the project, but the project proponents decline to adopt the mitigation measure or alternative; or

(D) Mitigation measures or alternatives which are considerably different from those analyzed in the previous EIR would substantially reduce one or more significant effects on the environment, but the project proponents decline to adopt the mitigation measure or alternative.

Likewise, California Public Resources Code (PRC) Section 21166 states that unless one or more of the following events occur, no Supplemental or Subsequent EIR shall be required by the lead agency or by any responsible agency:

(a) Substantial changes are proposed in the project which will require major revisions of the environmental impact report;
(b) Substantial changes occur with respect to the circumstances under which the project is being undertaken which will require major revisions in the environmental impact report; or
(c) New information, which was not known and could not have been known at the time the environmental impact report was certified as complete, becomes available.

As demonstrated by the analysis in this document, the Modified Project would not result in any new significant impacts, nor would it substantially increase the severity of previously identified significant impacts or present any of the other circumstances identified in CEQA Guidelines, section 15162 or PRC, section 21166 that would require the preparation of a supplemental or subsequent EIR. Rather, all of the impacts

associated with the Modified Project are within the envelope of impacts analyzed in the Certified EIR and do not constitute a new or substantially increased significant impact. Therefore, the modifications resulting from the Modified Project do not meet the criteria for a Supplemental or Subsequent EIR pursuant to Public Resources Code, Section 21166 and CEQA Guidelines Section 15162 and 15163.

2 PROJECT DESCRIPTION

2.1 EXISTING SETTING

The 14.08-acre, triangle-shaped Project Site is located in the City of Carson (City) at 21126, 21140, and 21212 Avalon Boulevard. The Project Site comprises assessor parcel numbers (APNs) 7337-003-012, -013, and -014. The site is bounded by Avalon Boulevard on the west, Interstate 405 on the northeast/east, and East 213th Street on the south. The site is currently developed with Fab Cars and Trophy Automotive Dealer Group in five buildings (totaling approximately 104,000 square feet) and surface parking. Land uses in proximity to the Project Site include an empty lot for which a multi-family/townhome development has been approved; a former landfill currently undergoing clean-up to the northwest; and government, commercial, and residential uses to the south. Other land uses in the greater Project Site area include the Dominguez Channel to the northeast; commercial, US Post Office, and single-family residential uses are across 213th to the south; and the Los Angeles County Sheriff's station and Carson City Hall further south on the east side of Avalon Boulevard. The General Plan land use designation for the Project Site is Downtown Mixed-Use (DMX), and the zoning for the site is Commercial Automotive.

2.2 PROJECT CHARACTERISTICS

The Modified Project includes demolition and removal of all existing uses from the Project Site and development of the site with 52 residential buildings accommodating a total of 315 residential dwelling units, including 283 townhomes and 32 affordable units, and associated vehicle parking, open space and recreational amenities, onsite circulation, and utility infrastructure.

All buildings would reach a maximum height of 36 feet. A breakdown of the bedroom count is included in Table 1.

Table 1
Bedroom Count Breakdown

Bedroom Size	Amount
Townhomes	
2 Bedroom	74 du
3 Bedroom	164 du
4 Bedroom	45 du
Total Townhomes	*283 du*
Affordable Units	
1 Bedroom	32 du
Total	**315 du**

du = dwelling unit

Source: ktgy Architecture + Planning, August 30, 2024.

Open Space

As shown in Table 2, the Modified Project would include a total of 151,767 square feet of open space. Recreational amenities included as part of the Modified Project include a pool, spa, and pool building with restroom; lounge chairs and tables; and a structure with a grill and seating.

Table 2
Modified Project Open Space

Open Space	Amount
Townhomes	
Private Open Space	24,377 sf
Common Open Space	106,390 sf
Total Townhomes	*130,767 sf*
Affordable Units	
Common Open Space	21,000 sf
Total	**151,767 sf**

sf = square feet

Source: ktgy Architecture + Planning, August 30, 2024.

Parking

As shown in Table 3, the Modified Project is required to provide a minimum total of 502 vehicle parking spaces. The Modified Project would provide 659 vehicle parking spaces, exceeding the amount required by 157 spaces. Vehicle parking for townhome residents would be provided in individual garages included as part of the townhome structures, while townhome resident guest parking would be provided in 77 surface parking spaces. Vehicle parking for the affordable units would be provided in surface parking spaces.

Access and Circulation

Vehicular access to the Modified Project would be provided via three private driveways: two on Avalon Boulevard and one on 213th Street. The northernmost driveway on Avalon Boulevard would lead into a small surface parking area, while the southernmost driveway on Avalon Boulevard along with the driveway on 213th Street would provide access to private driveway circulating onsite. The Modified Project's private driveway would also serve as a fire lane.

Table 3
Modified Project Vehicle Parking Summary

Use	Size	Vehicle Parking Rate	Amount
Townhomes			
2 Bedroom	74 du	1.5 spaces/du	111 spaces
3 Bedroom	164 du	1.5 spaces/du	246 spaces
4 Bedroom	45 du	2.5 spaces/du	113 spaces
		Total Required (Townhomes)	***470 spaces***
		Total Provided (Townhomes)	**566 spaces**
Affordable Units (Within 1-story Duplex and Triplex Buildings)			
1 Bedroom	32 du	1.0 spaces/du	32 spaces
		Total Required (Affordable Units)	***32 spaces***
		Total Provided (Affordable Units)	**32 spaces**
		OVERALL TOTAL REQUIRED	***502 spaces***
		OVERALL TOTAL PROVIDED	**659 spaces**

du = dwelling unit

[1] *Not applicable to 2-bedroom and 3-bedroom townhomes, which are capped at 1.5 spaces per unit, including guest parking, per the State Density Bonus Law.*

Source: ktgy Architecture + Planning, August 30, 2024.

Estimated Construction Schedule

As shown in Table 4, the Modified Project's construction phase would occur over approximately 18 months, with buildout of the Modified Project anticipated in 2026.

Table 4
Construction Schedule Assumptions

Phase	Duration	Notes
Demolition	Months 1-5	Removal of approximately 21,775 tons of debris hauled 50 miles to landfill in 12-cubic-yard capacity trucks.
Grading	Months 6-9	Approximately 31,000 cubic yards of soil imported 20 miles to site in 14-cubic-yard capacity trucks.
Trenching	Months 3-7	Trenching for utilities, including gas, water, electricity, and telecommunications.
Building Construction	Months 11-18	Footings and foundation work (e.g., pouring concrete pads), framing, welding; installing mechanical, electrical, and plumbing. Floor assembly, cabinetry and carpentry, elevator installations, low voltage systems, trash management.
Paving	Months 8-9	Flatwork, including paving of driveways and walkways
Architectural Coatings	Months 11-18	Application of interior and exterior coatings and sealants.

2.3 REQUESTED PERMITS AND APPROVALS

The Applicant is requesting the following approvals:

- Site Plan and Design Review
- Density Bonus Application
- Vesting Tentative Tract Map

No zoning change is requested for the Project because although the zoning for the Project site (Commercial Automotive) prohibits residential uses, such use prohibition is inconsistent with the applicable General Plan land use classification of DMX, which allows residential uses with minimum densities of 40 dwelling units per acre (du/ac), with removal of the DMX 40 du/ac minimum density requirement as a requested incentive/concession pursuant to the Density Bonus Application for the project. Per Government Code Section 65589.5(j)(4), a proposed housing development project is not inconsistent with the applicable zoning standards and criteria, and shall not require a rezoning, if the housing development project is consistent with the objective general plan standards and criteria but the zoning for the project site is inconsistent with the general plan. Also, per Government Code Section 65589.5(j)(3), the receipt of an incentive/concession is not a valid basis on which to find a proposed housing development project is inconsistent with applicable, objective general plan and zoning standards, and per Government Code Section 65915(j)(1), the granting of an incentive/concession shall not be interpreted, in

and of itself, to require a general plan amendment or zoning change. Accordingly, if the requested incentive/concession is granted, no zoning change is required for the Project.

3 ENVIRONMENTAL IMPACT ANALYSIS

This section provides an impact assessment of the Modified Project. The information below addresses each of the environmental issues that were previously analyzed within the scope of the previously adopted EIR for the General Plan Update and the most current Appendix G of the CEQA Guidelines. The conclusions of the Certified EIR are provided as a reference for each environmental issue area for purpose of describing how the proposed changes would not result in any new significant impacts and would not increase the severity of the significant impacts identified in the Certified EIR.

An Environmental Checklist Form was used to compare the anticipated environmental effects of the Modified Project with those disclosed in the Certified EIR and to review whether any of the conditions set forth in CEQA Guidelines Section 15162 and PRC Section 21166, requiring preparation of a Supplemental or Subsequent EIR, have been triggered.

The checklist and evaluation below provides the following information for each of these environmental impact categories:

1 IMPACT DETERMINATION IN THE CERTIFIED EIR: This section lists the impact determination made in the Certified EIR for each impact category.

2 DO PROPOSED CHANGES INVOLVE NEW SIGNIFICANT IMPACTS OR SUBSTANTIALLY MORE SEVERE IMPACTS? Pursuant to CEQA Guidelines Section 15162(a)(1), this section indicates whether the Modified Project would result in new significant impacts that have not already been considered and mitigated by the prior environmental review or would result in a substantial increase in the severity of a previously identified impact.

3 ANY NEW CIRCUMSTANCES INVOLVING NEW IMPACTS OR SUBSTANTIALLY MORE SEVERE IMPACTS? Pursuant to CEQA Guidelines Section 15162(a)(2), this section indicates whether there have been changes to the Project Site or the vicinity (circumstances under which the project is undertaken) which have occurred subsequent to the prior environmental documents, which would result in the Modified Project having new significant environmental impacts that were not considered in the prior environmental documents or that substantially increase the severity of a previously identified impact.

4 ANY NEW INFORMATION REQUIRING NEW ANALYSIS OR VERIFICATION? Pursuant to CEQA Guidelines Section 15162(a)(3)(A-D), this section indicates whether new information of substantial importance which was not known and could not have been known with the exercise of reasonable diligence at the time the previous environmental documents were certified as complete is available, requiring an update to the analysis of the previous environmental documents to

verify that the environmental conclusions and mitigations remain valid. If the new information shows that:

(A) The project will have one or more significant effects not discussed in the prior environmental documents;

(B) Significant effects previously examined will be substantially more severe than shown in the prior environmental documents;

(C) Mitigation measures or alternatives previously found not to be feasible would in fact be feasible and would substantially reduce one or more significant effects of the project, but the project proponents decline to adopt the mitigation measure or alternative; or

(D) Mitigation measures or alternatives which are considerably different from those analyzed in the prior environmental documents would substantially reduce one or more significant effects on the environment, but the project proponents decline to adopt the mitigation measure or alternative;

then the question would be answered "Yes", requiring the preparation of a Supplemental or Subsequent EIR. However, if the additional analysis completed as part of this environmental review finds that the conclusions of the prior environmental documents remain unchanged and no new significant impacts are identified, or identified environmental impacts are not found to be more severe, or there are no additional mitigation measures or alternatives now available or feasible but declined for adoption by the project proponent, then the question would be answered "No" and no Supplemental or Subsequent EIR is required. New studies completed as part of this environmental review are attached to this Addendum or are on file with the Planning Department.

5 MITIGATION MEASURES ADDRESSING IMPACTS: Pursuant to CEQA Guidelines Section 15162(a)(3), this section indicates whether the prior environmental document provides mitigation measures to address effects in the related impact category. If so, a "Yes" response will be provided. In some cases, the previously adopted mitigation measures have already been implemented or are not applicable to the Modified Project, or a significant impact was not identified and mitigation was not required. In either instance, a "No" response will be indicated.

6 CONCLUSION: For each environmental topic, a discussion of the conclusion relating to the analysis is provided.

3.1 AESTHETICS

Issues (and Supporting Information Sources)	Impact Determination in the Certified EIR	Do Proposed Changes Involve New Significant Impacts or Substantially More Severe Impacts?	Any New Circumstances Involving New Significant Impact or Substantially More Severe Impacts?	Any New Information Requiring New Analysis or Verification?	Certified EIR's Mitigation Measures Addressing Impacts
AESTHETICS: Except as provided in Public Resources Code Section 21099, would the project:					
(a) Have a substantial adverse effect on a scenic vista?	Less Than Significant	No	No	No	No
(b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?	No Impact	No	No	No	No
(c) In non-urbanized areas, substantially degrade the existing visual character or quality of public views of the site and its surroundings? (Public views are those that are experienced from publicly accessible vantage point.) If the project is in an urbanized area, would the project conflict with applicable zoning and other regulations governing scenic quality?	Less Than Significant	No	No	No	No
(d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?	Less Than Significant	No	No	No	No

Impacts related to aesthetics are discussed in the Certified EIR on pages 3.1-1 through 3.1-12.

3.1.1 Impact Determination in the EIR

(a) Would the project have a substantial adverse effect on a scenic vista?

The Certified EIR concluded that the 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 General Plan update relieved 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. 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 General Plan update 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 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 General Plan update on the City's scenic vistas was found to be less than significant.

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

The Certified EIR concluded that 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 polices of the General Plan update will be policies that ensure that new development will have minimal impact on open spaces and other scenic resources, no impact will occur.

(c) In non-urbanized areas, would the Project 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?

The Certified EIR concluded that the Planning Area consists of the City and portions of unincorporated Los Angeles County, which constitutes Carson's Sphere of Influence (SOI). Zoning and other regulations governing scenic quality applicable to the City include Carson Municipal Code provisions relating to development review and subdivision design. Policies in the 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 General Plan update would be subject to regulations in the Carson Municipal Code. For these reasons, the impact of the General Plan update on scenic quality within the City was thus determined to be less than significant. The General Plan update does not anticipate significant land use changes within the unincorporated SOI. Rather, land use designations reflect existing uses and are generally intended to provide consistency with the 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 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 General Plan update on scenic quality within the SOI was found to be less than significant.

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

The Certified EIR concluded that new development resulting from implementation of the 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 General Plan update 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. The 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 General Plan update with respect to light and glare was found to be less than significant.

3.1.2 Do Proposed Changes Involve New Significant Impacts or Substantially More Severe Impacts?

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

The Modified Project includes development of an infill site with 315 residential dwelling units, allowed under the existing zoning and land use designation for the site and in accordance with the State Density Bonus law. Consistent with the Certified EIR, the Modified Project would be required to conform to General Plan update policies (listed above), zoning, and other ordinances regarding aesthetic qualities such as lighting, signage, landscaping, and building setbacks, all of which ensures that the Modified Project will have minimal impact on open spaces and other scenic resources. Thus, the Modified Project would not have a substantial adverse effect on a scenic vista. Therefore, the Modified Project would not result in new or increased significant impacts beyond those identified in the Certified EIR.

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

The Project Site is not visible from any designated stated scenic highway. Thus, the Modified Project would not substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway. Therefore, the Modified Project would not result in new or increased significant impacts beyond those identified in the Certified EIR.

(c) In non-urbanized areas, would the Project 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?

The Modified Project includes development of an infill site located in an urban area with 315 residential dwelling units, allowed under the existing zoning and land use designation for the site and in accordance with the State Density Bonus law. The Modified Project would be required to comply with applicable General Plan update policies (listed above), zoning, the City's Municipal Code, and other regulations governing scenic quality. Thus, the Modified Project would not conflict with applicable zoning and other regulations

governing scenic quality. Therefore, the Modified Project would not result in new or increased significant impacts beyond those identified in the Certified EIR.

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

The Modified Project includes development of an infill site located in an urban area with 315 residential dwelling units, allowed under the existing zoning and land use designation for the site and in accordance with the State Density Bonus law. The Modified Project would be required to comply with applicable General Plan update policies (listed above) and the City's Municipal Code regulations that limit light and glare for new residential development. Thus, the Modified Project would not create a new source of substantial light or glare which would adversely affect day or nighttime views in the area. Therefore, the Modified Project would not result in new or increased significant impacts beyond those identified in the Certified EIR.

General Plan Policies

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-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.

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.

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.

Mitigation Measures

None required.

3.1.2 Any New Circumstances Involving New Significant Impact or Substantially More Severe Impacts?

No. As discussed above, the Modified Project would not result in any new or more severe significant impacts beyond what were identified in the Certified EIR.

3.1.3 Any New Information Requiring New Analysis or Verification?

No. There is no new information requiring new analysis or verification.

3.1.4 EIR's Mitigation Measures Addressing Impact

None required.

3.1.5 Conclusion

As discussed above, the Modified Project would not result in any of the conditions set forth in PRC Section 21166(c) or CEQA Guidelines Sections 15162 or 15163 that would require the preparation of a Supplemental or Subsequent EIR.

3.1 AGRICULTURE AND FORESTRY RESOURCES

Issues (and supporting Information Sources)	Impact Determination in the Certified EIR	Do Proposed Changes Involve New Significant Impacts or Substantially More Severe Impacts?	Any New Circumstances Involving New Significant Impact or Substantially More Severe Impacts?	Any New Information Requiring New Analysis or Verification?	Certified EIR's Mitigation Measures Addressing Impacts
AGRICULTURE AND FORESTRY RESOURCES: Would the project:					
(a) 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?	No Impact	No	No	No	No
(b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?	No Impact	No	No	No	No
(c) Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code Section 12220(g)), timberland (as defined by Public Resources Code 4526), or timberland zoned Timberland Production (as defined by Government Code Section 51104(g))?	No Impact	No	No	No	No
(d) Result in the loss of forest land or conversion of forest land to non-forest use?	No Impact	No	No	No	No
(e) 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 forest land to non-forest use?	No Impact	No	No	No	No

Impacts related to agricultural resources are discussed in the Certified EIR on pages 5-1 and 5-2.

3.2.1 Impact Determination in the EIR

The Certified EIR concluded that there are no agricultural resources in the Planning Area, and no impacts related to any of the subcategories listed above will occur as a result of the General Plan update.

General Plan Policies

None.

Mitigation Measures

None.

3.2.2 Do Proposed Changes Involve New Significant Impacts or Substantially More Severe Impacts?

As stated above, there are no agricultural resources in the Planning Area, which includes the Project Site. Thus, the Modified Project would not result in any impacts related to agricultural resources. Therefore, the Modified Project would not result in a new or increased significant impacts beyond those identified in the Certified EIR.

3.2.3 Any New Circumstances Involving New Significant Impact or Substantially More Severe Impacts?

No. As discussed above, the Modified Project would not result in any new or more severe significant impacts beyond what were identified in the Certified EIR.

3.2.4 Any New Information Requiring New Analysis or Verification?

No. There is no new information requiring new analysis or verification.

3.2.5 EIR's Mitigation Measures Addressing Impact

None required or identified.

3.2.6 Conclusion

As discussed above, the Modified Project would not result in any of the conditions set forth in PRC Section 21166(c) or CEQA Guidelines Sections 15162 or 15163 that would require the preparation of a Supplemental or Subsequent EIR.

3.3 AIR QUALITY

Issues (and supporting Information Sources)	Impact Determination in the Certified EIR	Do Proposed Changes Involve New Significant Impacts or Substantially More Severe Impacts?	Any New Circumstances Involving New Significant Impact or Substantially More Severe Impacts?	Any New Information Requiring New Analysis or Verification?	Certified EIR's Mitigation Measures Addressing Impacts
AIR QUALITY: Would the project:					
(a) Conflict with or obstruct implementation of the applicable air quality plan?	Less Than Significant	No	No	No	No
(b) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard?	Significant and Unavoidable	No	No	No	Yes
(c) Expose sensitive receptors to substantial pollutant concentrations?	Significant and Unavoidable	No	No	No	Yes
(d) Result in other emissions (such as those leading to odors adversely affecting a substantial number of people?	Significant and Unavoidable	No	No	No	Yes

Impacts related to air quality are discussed in the Certified EIR on pages 3.2-1 through 3.2-56.

3.3.1 Impact Determination in the EIR

(a) Would the Project conflict with or obstruct implementation of the applicable air quality plan?

The Certified EIR states that CEQA requires that general plans be evaluated for consistency with the current Air Quality Management Plan (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 Certified EIR stated that the Air Basin is designated nonattainment for ozone (O_3) and particulate matter 2.5 ($PM_{2.5}$) under the California Ambient Air Quality Standards (CAAQS) and the National Ambient Air Quality Standards (NAAQS), nonattainment for lead (Los Angeles County only) under the NAAQS, and nonattainment for particulate matter 10 (PM_{10}) under the CAAQS. The General Plan update involves long-term growth associated with buildout of the City. Thus, the emissions of criteria pollutants associated with future developments under the General Plan update could exceed SCAQMD thresholds for criteria pollutants. Future development under the General Plan update will be required to comply with the California Air Resources Board's (CARB) requirements to minimize short-term emissions from on-road and off-road diesel equipment, including the Airborne Toxic Control Measure (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 1113 for controlling volatile organic compound (VOC) emissions from architectural coatings. Furthermore, as applicable to the type of growth, individual projects under the General Plan update will comply with fleet rules to reduce on-road truck emissions. Compliance with these measures and requirements will be consistent with and meet or exceed the AQMP requirements for control strategies intended to reduce emissions from construction equipment and activities. Therefore, the Certified EIR concluded that the construction anticipated by the General Plan update will be consistent with the AQMP under the first indicator.

Growth Projections

The Certified EIR concluded that the General Plan update will result in an increase in short-term employment compared to existing conditions. Although the construction anticipated by the General Plan update will generate construction workers, it will not necessarily create new construction jobs; construction-related jobs generated by the General Plan update will likely be filled by employees within the construction industry within the City 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 Certified EIR concluded that the construction jobs generated by the General Plan update will not conflict with the long-term employment or population projections upon which the AQMPs are based.

Operation

Control Strategies

Future development under the General Plan Update will 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.

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 the Southern California Association of Governments (SCAG) and SCAQMD, although some can be furthered by individual development projects.

The location, design, and land uses of the growth anticipated by the General Plan Update will 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.

The General Plan Update focused 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 were to facilitate development to achieve this vision and respond to the need to accommodate the City's growing and diverse population.

The General Plan Update outlined 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 improvements to the bicycle, pedestrian, and road networks will make it easier for residents to travel throughout the community. Therefore, the General Plan Update does 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 Certified EIR concluded that the General Plan Update is consistent with the AQMP under the first indicator.

Growth Projections

The emissions inventory for the 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 that is consistent with the General Plan Update will increase vehicle trips and VMT that would result in emissions of ozone precursors and particulate matter.

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

The City 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 General Plan update would not conflict with or obstruct the implementation of the applicable air quality plan. The General Plan policies listed below will potentially reduce

emissions, which will address potential impacts related to conflicts with an applicable air quality plan.

(b) Would the Project result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard?

Construction

The Certified EIR stated that 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 General Plan Update and there is no knowledge as to timing of construction, location or the exact nature of future projects, analysis of construction emissions is 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 will 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 General Plan Update will 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 General Plan Update will be required to comply with the CARB ATCM, 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 will 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 will reduce emissions, particularly for nitrogen oxide (NO_x), PM_{10}, and $PM_{2.5}$, during future construction activities under the 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, the Certified EIR concluded that construction activities could result in a significant regional air quality impact.

Operation

The Certified EIR stated that operation of future development under the General Plan Update will 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 General Plan Update include passenger vehicles, onsite use of off-road equipment, and delivery trucks. VMT data, takes into account ridership, mode, and distance on freeways and local streets.

The net change in operational emissions from existing conditions compared to existing-plus-buildout of new development under the General Plan Update will not exceed the SCAQMD regional significance thresholds. The net change in emissions at 2040 buildout would be negative compared to existing conditions primarily due to the focus of the General Plan Update on infill development and revitalization to help the City 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 non-residential uses will 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 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 General Plan policies, listed below, will potentially reduce emissions and could potentially address impacts. In addition, future development under the General Plan Update will 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 will be identified and compared against relevant thresholds. Individual projects that exceed the thresholds would normally result in a potentially significant impact and require mitigation.

(c) Would the Project expose sensitive receptors to substantial pollutant concentrations?

Construction

The Certified EIR concluded that construction of future individual projects under the General Plan Update 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 VOC emissions. 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, 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, carbon monoxide (CO), PM_{10}, and $PM_{2.5}$. 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, hazardous air pollutants (HAPs), are also used as indicators of ambient air quality conditions. Sensitive receptors maybe located within close proximity to future projects under the General Plan Update. 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 General Plan Update 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 General Plan Update 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 General Plan Update will be required to conduct their own CEQA analysis and will 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 will be accommodated by the General Plan Update has the potential to expose sensitive receptors to substantial pollutant concentrations. The Certified EIR concluded that 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 Certified EIR stated that 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 General Plan Update, industrial-type land uses such as the aforementioned land uses may be permitted within the Planning Area. As operation of some 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 result in a potentially significant impact.

The General Plan policies, listed below, will potentially reduce emissions and could potentially address impacts. In addition, future development under the General Plan Update will be required to conduct their own CEQA analysis and would determine significance based on the individual project specifics. The Certified EIR concluded that through each project's individual environmental review process, potential impacts will 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 Certified EIR stated that the potential for the General Plan Update to cause or contribute to CO hotspots was 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. This comparison demonstrates that the General Plan Update will not cause or contribute considerably to the formation of CO hotspots, that CO concentrations at project intersections will remain well below the ambient air quality standards and that no further CO analysis is warranted or required.

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 parts per million (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 2003, 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 General Plan Update-impacted intersections will 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 ppm (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 is 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 is 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 will not exceed the applicable thresholds. Thus, this comparison demonstrates that the General Plan Update will not contribute considerably to the formation of CO hotspots and no further CO analysis is required. The Certified EIR concluded that the General Plan Update would result in a less-than-significant impact with respect to CO hotspots.

Toxic Air Contaminants

The Certified EIR stated that construction and operation of the General Plan Update will result in emissions of toxic air contaminants (TAC), predominantly from diesel particulate emissions from on- and off-road vehicles during construction and from the 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, the Certified EIR concluded that health risk with respect to the development anticipated by the General Plan Update would be potentially significant.

Health Impacts

The Certified EIR stated that 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 General Plan Update, there is no way to accurately calculate the potential for health impacts from the overall General Plan Update. 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 Certified EIR concluded that the General Plan Update would result in a potentially significant health impact.

(d) Would the Project result in other emissions (such as those leading to odors adversely affecting a substantial number of people?

Construction

The Certified EIR concluded that 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 General Plan Update 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 General Plan Update's uses will not 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, the Certified EIR concluded that project-related construction activities could result in a significant air quality impact with respect to other emissions.

Operational

The Certified EIR stated that the General Plan Update's land uses are related to growth in residential, office, retail/restaurant, commercial, and park land uses and will not 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 General Plan Update 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, the Certified EIR concluded that project-related operational activities could result in a significant air quality impact with respect to other emissions.

General Plan Policies

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.

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 multifamily 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 Policies

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 Policies

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.

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.

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.

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-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 NOX, CO, PM10 and/or PM2.5 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.

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., nonexempt 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., nonexempt 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).

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 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.

3.3.2 Do Proposed Changes Involve New Significant Impacts or Substantially More Severe Impacts?

(a) Would the Project conflict with or obstruct implementation of the applicable air quality plan?

The Modified Project includes development of an infill site with 315 residential dwelling units, allowed under the existing zoning and land use designation for the site and in accordance with the State Density Bonus law, as discussed previously in Section 2.3. The Certified EIR stated that projects considered consistent with the 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.

Additionally, the Certified EIR stated that all development under the General Plan update is 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. Further, the Certified EIR stated that individual projects under the General Plan Update will be required to undergo subsequent environmental review pursuant to CEQA and will be required to demonstrate compliance with the AQMP.

An assessment of the Modified Project's consistency with the current AQMP has been conducted and is included in Attachment A. As demonstrated in that assessment, the Modified Project would be consistent with the AQMP. Thus, the Modified Project would not conflict with or obstruct implementation of the applicable air quality plan. Therefore, the Modified Project would not result in new or increased significant impacts beyond those identified in the Certified EIR.

(b) Would the Project result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard?

The Modified Project includes development of an infill site with 315 residential dwelling units, allowed under the existing zoning and land use designation for the site and in accordance with the State Density Bonus law. The Certified EIR stated that each future project developed under the General Plan Update will be required to comply with SCAQMD rules and regulations as well as conduct their own applicable CEQA analysis for construction and operational activities and will determine significance based on the individual project specifics. Furthermore, future construction activities under the General Plan Update will be required to comply with the CARB ATCM, 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 will 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.

In conformance with the Certified EIR, an analysis of the Modified Project's construction and operational air quality impacts was conducted and is included in Attachment A. As demonstrated in that analysis, the Modified Project would not generate pollutant emissions in excess of SCAQMD's significance thresholds. Thus, the Modified Project would not result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard. Therefore, the Modified Project would not result in new or increased significant impacts beyond those identified in the Certified EIR.

(c) Would the Project expose sensitive receptors to substantial pollutant concentrations?

The Modified Project includes development of an infill site with 315 residential dwelling units, allowed under the existing zoning and land use designation for the site and in accordance with the State Density Bonus law. The Certified EIR stated that each future project developed under the Modified Project will be required to conduct their own CEQA analysis for construction and operational activities and will 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.

In conformance with the Certified EIR, an analysis of the Modified Project's construction and operational air quality impacts on nearby sensitive receptors was conducted and is included in Attachment A. As demonstrated in that analysis, the Modified Project would not generate pollutant emissions in excess of applicable significance thresholds. Thus, the Modified Project would not expose sensitive receptors to substantial pollutant concentrations. Therefore, the Modified Project would not result in new or increased significant impacts beyond those identified in the Certified EIR.

(d) Would the Project result in other emissions (such as those leading to odors adversely affecting a substantial number of people?

The Modified Project includes development of residential land uses, which are not associated with odor emissions. Thus, the Modified Project would not result in other emissions (such as those leading to odors adversely affecting a substantial number of people. Therefore, the Modified Project would not result in new or increased significant impacts beyond those identified in the Certified EIR.

3.3.3 Any New Circumstances Involving New Significant Impact or Substantially More Severe Impacts?

No. As discussed above, the Modified Project would not result in any new or more severe significant impacts beyond what were identified in the Certified EIR.

3.3.4 Any New Information Requiring New Analysis or Verification?

No. There is no new information requiring new analysis or verification.

3.3.5 EIR's Mitigation Measures Addressing Impact

None required.

3.3.6 Conclusion

As discussed above, the Modified Project would not result in any of the conditions set forth in PRC Section 21166(c) or CEQA Guidelines Sections 15162 or 15163 that would require the preparation of a Supplemental or Subsequent EIR.

3.4 BIOLOGICAL RESOURCES

Issues (and supporting Information Sources)	Impact Determination in the Certified EIR	Do Proposed Changes Involve New Significant Impacts or Substantially More Severe Impacts?	Any New Circumstances Involving New Significant Impact or Substantially More Severe Impacts?	Any New Information Requiring New Analysis or Verification?	Certified EIR's Mitigation Measures Addressing Impacts
BIOLOGICAL RESOURCES: Would the project:					
(a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?	Less Than Significant	No	No	No	Yes
(b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?	Less Than Significant	No	No	No	Yes
(c) Have a substantial adverse effect on state or federally-protected wetlands, (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?	No Impact	No	No	No	No
(d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?	Less Than Significant	No	No	No	Yes
(e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	No Impact	No	No	No	No
(f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?	No Impact	No	No	No	No

Impacts related to biological resources are discussed in the Certified EIR on pages 3.3-1 through 3.3-28.

3.4.1 Impact Determination in the EIR

(a) Would the Project have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?

Construction

Special-Status Plants

The Certified EIR concluded that special-status plant species (Southern Tarplant) has been recorded within the Planning Area, where future development allowed by the General Plan update could directly or indirectly impact this biological resource. As anticipated by the buildout of the 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 General Plan update would be required to comply with the General Plan policies listed below. Specifically, compliance with Guiding Policy OSEC-G-4 would require future projects under the 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 General Plan policies would help to reduce impacts to special-status plants due to construction of future projects under the 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 the California Endangered Species Act (CESA) and/or the Federal Endangered Species Act (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 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 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 General Plan update would be less than significant.

Special-Status Wildlife

The Certified EIR concluded that 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 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 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 General Plan update would be required to comply with the General Plan policies listed below. Specifically, compliance with Guiding Policy OSEC-G-4 would require future projects under the 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 General Plan policies would help to reduce impacts to biological resources due to construction of future projects under the 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 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 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 General Plan update would be less than significant.

Nesting Birds

The Certified EIR concluded that nesting birds and/or nesting bird habitat have been recorded within the Planning Area, where future development allowed by the 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 Migratory Bird Treaty Act (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 General Plan Update would be required to comply with the General Plan policies listed below. Specifically, compliance with Guiding Policies OSEC-G-3 and OSEC-G-5 and Implementing Policies OSECP-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 General Plan polices listed below, future applicants would also be required to comply with the MBTA, which would further reduce impacts to nesting birds.

Although compliance with 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 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 General Plan Update would be less than significant.

Operations

Special-Status Plants

The Certified EIR concluded that operation of future projects facilitated under the 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 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 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

The Certified EIR concluded that operation of future projects developed under the 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 roadkill 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 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

The Certified EIR concluded that operation of future projects developed under the 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 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.

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

The Certified EIR concluded that 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 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 General Plan Update would be required to comply with the General Plan policies listed below Specifically, compliance with Guiding Policy OSEC-G-4 would require future projects under the 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 General Plan policies and the applicable laws and regulations would help to minimize impacts to

sensitive natural communities, project-specific mitigation measures listed below were also 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 General Plan Update would be less than significant.

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

As discussed in the Certified EIR ,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 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 will occur related to adversely affecting federally or state-protected wetlands.

(d) Would the Project interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?

As discussed in the Certified EIR, 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.

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 potentially significant due to their decline in the region and/or their suitability as habitat for sensitive species. With buildout of the 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 General Plan Update would be required to comply with the General Plan policies listed below. Specifically, compliance with Guiding Policy OSEC-G-4 requires future projects under the 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 General Plan policies and the applicable laws and regulations would help to minimize impacts to riparian habitat, implementation of the 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.

(e) Would the Project conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?

Implementation of the General Plan Update will 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 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, 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 tree resources would be minimized. Therefore, no impact associated with creating a conflict with a tree preservation policy or ordinance will occur.

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

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 General Plan Update would not conflict or interfere with an adopted habitat conservation plan. While the presence of biological resources is relatively limited within the Planning Area, General Plan policies aim to protect and enhance the few biological resources within the Planning Area, as listed under Impact BIO-1. Therefore, no impact related to creating a conflict with a habitat conservation plan will occur.

General Plan Policies

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.

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 songbirds 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., nonexempt 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.

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.

3.4.2 Do Proposed Changes Involve New Significant Impacts or Substantially More Severe Impacts?

(a) Would the Project have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive,

or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?

Habitat for special-status species in general requires shelter and protection from weather and predators, humans, and other types of danger; access to food/nutrition sources, water, and sunlight; particular types of soil and hydrological conditions; and safe breeding and germination conditions. The Project Site is located in an urban area and is currently completely developed with Fab Cars and Trophy Automotive Dealer Group in five buildings (totaling approximately 104,000 square feet) and surface parking. Based on a desktop review of the Project Site, the site does not contain any habitat that would support special-status species. Thus, the Modified 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 California Department of Fish and Wildlife or U.S. Fish and Wildlife Service. Therefore, the Modified Project would not result in new or increased significant impacts beyond those identified in the Certified EIR.

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

The Project Site is located in an urban area and is currently developed with Fab Cars and Trophy Automotive Dealer Group in five buildings (totaling approximately 104,000 square feet) and surface parking. Based on a desktop review of the Project Site, the site does not contain riparian habitat or sensitive natural community. The site does contain landscaping trees, which would be removed as part of the Modified Project. However, the Applicant would be required to comply with Mitigation Measure BIO-6 (Nesting Bird Surveys) listed above that would ensure protection of nesting birds, if present. Thus, the Modified Project would not have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service. Therefore, the Modified Project would not result in new or increased significant impacts beyond those identified in the Certified EIR.

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

The Project Site is located in an urban area and is currently developed with Fab Cars and Trophy Automotive Dealer Group in five buildings (totaling approximately 104,000 square feet) and surface parking. Based on a desktop review of the Project Site, the site does not contain wetlands. Thus, the Modified Project would not have a substantial adverse effect on state or federally-protected wetlands, (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other

means. Therefore, the Modified Project would not result in new or increased significant impacts beyond those identified in the Certified EIR.

(d) Would the Project interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?

As discussed in the Certified EIR, limited wildlife movement is expected within the Planning Area due to the prevalence of developed areas and lack of native habitats. The Certified EIR noted that riparian woodland communities in the Planning Area could act as wildlife corridors. The Project Site is located in an urban area and is completely currently developed with Fab Cars and Trophy Automotive Dealer Group in five buildings (totaling approximately 104,000 square feet) and surface parking. Based on a desktop review of the Project Site, the site does not contain any riparian woodland, is not part of a migratory corridor, and is not located near any wildlife nursery sites. Thus, the Modified 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. Therefore, the Modified Project would not result in new or increased significant impacts beyond those identified in the Certified EIR.

(e) Would the Project conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?

Trees located on the Project Site are not naturally occurring and were planted at the site as a part of the landscaping of the automotive and parking uses at the site. The City does not have any policies or ordinances related to protected trees, per se, but does have policies related to promoting a strong urban forest across public and private properties (Guiding Policy OSEC-G-5 and Implementing Policy OSEC-P-5) and enhancing the health of trees (OSEC-P-6). The County of Los Angeles has an ordinance related to protected oak trees. However, there are not oak trees on the site. Additionally, the Project would be required to comply with General Plan policies OSEC-G-5, OSEC-P-5, and OSEC-P-6 to ensure the trees planted as part of the Project remain healthy and contribute to the City's urban forest. Thus, the Modified Project would not conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance. Therefore, the Modified Project would not result in new or increased significant impacts beyond those identified in the Certified EIR.

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

The Project Site is not subject to any habitat conservation plan or natural community conservation plan. Thus, the Modified Project would not conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan. Therefore, the Modified

Project would not result in new or increased significant impacts beyond those identified in the Certified EIR.

3.4.3 Any New Circumstances Involving New Significant Impact or Substantially More Severe Impacts?

No. As discussed above, the Modified Project would not result in any new or more severe significant impacts beyond what were identified in the Certified EIR.

3.4.4 Any New Information Requiring New Analysis or Verification?

No. There is no new information requiring new analysis or verification.

3.4.5 EIR's Mitigation Measures Addressing Impact

The Modified Project would implement Mitigation Measure BIO-6.

3.4.6 Conclusion

As discussed above, the Modified Project would not result in any of the conditions set forth in PRC Section 21166(c) or CEQA Guidelines Sections 15162 or 15163 that would require the preparation of a Supplemental or Subsequent EIR.

3.5 CULTURAL RESOURCES

Issues (and supporting Information Sources)	Impact Determination in the Certified EIR	Do Proposed Changes Involve New Significant Impacts or Substantially More Severe Impacts?	Any New Circumstances Involving New Significant Impact or Substantially More Severe Impacts?	Any New Information Requiring New Analysis or Verification?	Certified EIR's Mitigation Measures Addressing Impacts
CULTURAL RESOURCES: Would the project:					
(a) Cause a substantial adverse change in the significance of a historical resource pursuant to CEQA Guidelines §15064.5?	Significant and Unavoidable	No	No	No	Yes
(b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to CEQA Guidelines §15064.5?	Less Than Significant With Mitigation	No	No	No	Yes
(c) Disturb any human remains, including those interred outside of formal cemeteries?	Less Than Significant	No	No	No	No

Impacts related to cultural resources are discussed in the Certified EIR on pages 3.4-1 through 3.4-24.

3.5.1 Impact Determination in the EIR

(a) Would the Project cause a substantial adverse change in the significance of a historical resource pursuant to CEQA Guidelines §15064.5?

The Certified EIR stated that future development proposals initiated under the 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 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 conducted for the Certified EIR 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. 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 Sacred Lands File (SLF) records search conducted for the Certified EIR revealed that no known Native American resources from the Native American Heritage Commission (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." 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 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, the Certified EIR concluded that 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

(b) Would the Project cause a substantial adverse change in the significance of an archaeological resource pursuant to CEQA Guidelines §15064.5?

The Certified EIR stated that 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. 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 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 will 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.” Based on review of historic topographic maps, the City appears to have been a highly suitable area for the inhabitance 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 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.

In accordance with Mitigation Measure CUL-1, 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 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.

(c) Would the Project disturb any human remains, including those interred outside of formal cemeteries?

The Certified EIR stated that impacts on human remains, including those interred outside of dedicated cemeteries, could occur as a result of future development proposals initiated under the General Plan Update that include ground disturbance (e.g., grubbing/clearing, grading, excavation, trenching, and boring). 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 South Central Coast Information Center (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 landowner 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 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. The Certified EIR concluded that adherence to existing regulations and the General Plan policy would ensure that the General Plan Update's impact associated with the disturbance of human remains would be less than significant.

General Plan Policies

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.

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.

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.

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.

3.5.2 Do Proposed Changes Involve New Significant Impacts or Substantially More Severe Impacts?

(a) Would the Project cause a substantial adverse change in the significance of a historical resource pursuant to CEQA Guidelines §15064.5?

The Project Site is located in an urban area and is currently developed with Fab Cars and Trophy Automotive Dealer Group in five buildings (totaling approximately 104,000 square feet) and surface parking. Some of the buildings at the site were constructed prior to 1980.

As such, these buildings are older than 45 years in age. However, consistent with the requirements of the Certified EIR, the Project would comply with Mitigation Measure MM-CUL-1 and would be required to prepare a historic resources report prior to Project development to determine whether the buildings are significant historical resources under CEQA and to identify any mitigation measures that might be needed. Thus, the Modified Project would not cause a substantial adverse change in the significance of a historical resource pursuant to CEQA Guidelines §15064.5. Therefore, the Modified Project would not result in new or increased significant impacts beyond those identified in the Certified EIR.

(b) Would the Project cause a substantial adverse change in the significance of an archaeological resource pursuant to CEQA Guidelines §15064.5?

The Project Site is located in an urban area and is currently developed with Fab Cars and Trophy Automotive Dealer Group in five buildings (totaling approximately 104,000 square feet) and surface parking. The Modified Project includes development of an infill site with 315 residential dwelling units, allowed under the existing zoning and land use designation for the site and in accordance with the State Density Bonus law. The Modified Project would include ground-disturbing activities, which could uncover unknown archaeological resources. However, the Applicant would be required to comply with Mitigation Measure CUL-2, which requires preparation of an archaeological report and compliance with any mitigation measures identified in the report. Thus, the Modified Project would not cause a substantial adverse change in the significance of an archaeological resource pursuant to CEQA Guidelines §15064.5. Therefore, the Modified Project would not result in new or increased significant impacts beyond those identified in the Certified EIR.

(c) Would the Project disturb any human remains, including those interred outside of formal cemeteries?

The Project Site is located in an urban area and is currently developed with Fab Cars and Trophy Automotive Dealer Group in five buildings (totaling approximately 104,000 square feet) and surface parking. The Modified Project includes development of an infill site with 315 residential dwelling units, allowed under the existing zoning and land use designation for the site and in accordance with the State Density Bonus law. The Modified Project would include ground-disturbing activities, which could uncover unknown human remains. If human remains are discovered, the Applicant would be required to comply with applicable regulations in the Public Resources Code described previously. Thus, the Modified Project would not disturb any human remains, including those interred outside of formal cemeteries. Therefore, the Modified Project would not result in new or increased significant impacts beyond those identified in the Certified EIR.

3.5.3 Any New Circumstances Involving New Significant Impact or Substantially More Severe Impacts?

No. As discussed above, the Modified Project would not result in any new or more severe significant impacts beyond what were identified in the Certified EIR.

3.5.4 Any New Information Requiring New Analysis or Verification?

No. There is no new information requiring new analysis or verification.

3.5.5 EIR's Mitigation Measures Addressing Impact

The Modified Project would implement Mitigation Measure CUL-2.

3.5.6 Conclusion

As discussed above, the Modified Project would not result in any of the conditions set forth in PRC Section 21166(c) or CEQA Guidelines Sections 15162 or 15163 that would require the preparation of a Supplemental or Subsequent EIR.

3.6 ENERGY

Issues (and supporting Information Sources)	Impact Determination in the Certified EIR	Do Proposed Changes Involve New Significant Impacts or Substantially More Severe Impacts?	Any New Circumstances Involving New Significant Impact or Substantially More Severe Impacts?	Any New Information Requiring New Analysis or Verification?	Certified EIR's Mitigation Measures Addressing Impacts
ENERGY: Would the project:					
(a) Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation?	Less Than Significant	No	No	No	No
(b) Conflict with or obstruct a state or local plan for renewable energy or energy efficiency?	Less Than Significant	No	No	No	No

Impacts related to energy are discussed in the Certified EIR on pages 3.5-1 through 3.5-32.

3.6.1 Impact Determination in the EIR

(a) Would the Project result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation?

Construction

Electricity

The Certified EIR stated that 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 Certified EIR concluded that 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

The Certified EIR stated that 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 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 Certified EIR concluded that 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

The Certified EIR stated that 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. Construction of new development that could occur from adoption of the 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 California Code of Regulations (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 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. 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, the Certified EIR concluded that construction of new development that could occur with the adoption of the General Plan Update would not result in the wasteful, inefficient, and unnecessary consumption of energy, and this impact would be less than significant.

Operation

Electricity

The Certified EIR stated that operation of new development that could occur from adoption of the General Plan Update would result in demand for electricity resources including for water supply, conveyance, distribution, and treatment. Operation of existing development and new development under the General Plan Update would result in a net increase of electricity compared to existing conditions of approximately 2,520 megawatt hours (MWh) per year. New development under the 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. Since the standards are updated every three years, future new development under the General Plan Update would be designed to include energy saving features to comply with future Title 24 standards and CALGreen Code requirements, 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 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, Southern California Edison (SCE) had an annual electric sale to customers of approximately 85,399,000 MWh. The net increase in future electricity demand from existing development and new development that could occur from adoption of the 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, the Certified EIR concluded that 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 Certified EIR stated that new development that could occur from adoption of the General Plan Update would result in demand for natural gas resources. 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. Since the energy efficiency standards are updated every three years, future new development with adoption of the General Plan Update would be designed to include energy saving features to comply with future Title 24 standards and

CALGreen Code requirements, which could include improvements to water heating efficiency or reduced natural gas-fueled systems in buildings. Further, implementation of policies in the 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 policies for renewable energy. Therefore, the Certified EIR concluded that 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. The net increase in future natural gas demand from existing development and new development that could occur from adoption of the 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. Therefore, it is anticipated that SoCalGas' existing and planned natural gas supplies would be sufficient to support the demand for natural gas at full City buildout conditions. Therefore, the Certified EIR concluded that 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

The Certified EIR stated that 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.

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 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. 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 General Plan Update 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 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 General Plan Update would support statewide and regional efforts to improve transportation energy efficiency and reduce transportation energy consumption.

As the General Plan Update would support statewide and regional efforts to improve transportation energy efficiency, and adoption of the 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 General Plan Update would not conflict with the actions and strategies contained in the 2020 RTP/SCS. In fact, the general location of new development that would occur under the General Plan Update would not conflict with the recommendations in these documents and would support their goals. In addition, with the adoption of the 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. 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 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 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.

The Certified EIR concluded that based on the above, future new development with the adoption of the General Plan Update would minimize operational transportation fuel demand in line with state, regional, and county goals. Therefore, the General Plan Update would not lead to wasteful, inefficient, and unnecessary consumption of energy, and this impact would be less than significant.

(b) Would the Project conflict with or obstruct a state or local plan for renewable energy or energy efficiency?

Construction

The Certified EIR stated that construction of new development that could occur from adoption of the 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 Environmental Protection Agency (EPA) and National Highway Traffic Safety Administration (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. 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 vehicle type. 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, the Certified EIR concluded that based on the information above, construction of new development under the General Plan Update would comply with existing energy standards, and the impact would be less than significant.

Operations

The Certified EIR stated that operation of new development that could occur from adoption of the 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 Energy Efficiency Climate Action Plan (EECAP) identifies community-wide strategies to lower energy use. Energy reductions within the EECAP are from transportation, land use, energy generation and consumption, water consumption and waste generation. The General Plan Update incorporates the EECAP 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 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 has established goals and strategies that would reduce energy use. The EECAP focuses on increasing energy efficiency and reducing greenhouse gas (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 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. With respect to operational transportation-related fuel usage, future development under the 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 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.

Policies in the Circulation Element 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 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. 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 the City 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.

The General Plan Update 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 to facilitate development to achieve this vision and respond to the need to accommodate the City's growing and diverse population.

The 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 improvements to the bicycle, pedestrian, and road networks will make it easier for residents to travel throughout the community. Therefore, the General Plan Update 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, the Certified EIR concluded that operation of new development under the General Plan Update would comply with plans for energy efficiency and renewable energy and this impact would be less than significant.

General Plan Policies

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.

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 multifamily 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.

3.6.2 Do Proposed Changes Involve New Significant Impacts or Substantially More Severe Impacts?

(a) Would the Project result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation?

The Project Site is located in an urban area and is currently developed with Fab Cars and Trophy Automotive Dealer Group in five buildings (totaling approximately 104,000 square feet) and surface parking. The Modified Project includes demolition and removal of all existing uses from the Project Site and development of the site with 315 residential dwelling units, allowed under the existing zoning and land use designation for the site and in accordance with the State Density Bonus law.

As concluded in the Certified EIR, the Modified Project's use of electricity and transportation fuel during construction would be temporary and comply with regulatory measures to reduce the inefficient, wasteful, and unnecessary consumption of energy, such as petroleum-based transportation fuels. Additionally, during the operational phase of the Modified Project, electricity and natural gas would be provided to the Modified Project via existing sources and infrastructure, and all energy consumption (including transportation fuel) would occur in accordance with evolving energy and fuel efficiency standards. Thus, the Modified Project would not result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation. Therefore, the Modified Project would not result in new or increased significant impacts beyond those identified in the Certified EIR.

(b) Would the Project conflict with or obstruct a state or local plan for renewable energy or energy efficiency?

The Project Site is located in an urban area and is currently developed with Fab Cars and Trophy Automotive Dealer Group in five buildings (totaling approximately 104,000 square feet) and surface parking. The Modified Project includes demolition and removal of all existing uses from the Project Site and development of the site with 315 residential dwelling units, allowed under the existing zoning and land use designation for the site and in accordance with the State Density Bonus law. The Modified Project would comply with all plans for energy efficiency and renewable energy. Thus, the Modified Project would not conflict with or obstruct a state or local plan for renewable energy or energy efficiency. Therefore, the Modified Project would not result in new or increased significant impacts beyond those identified in the Certified EIR.

3.6.3 Any New Circumstances Involving New Significant Impact or Substantially More Severe Impacts?

No. As discussed above, the Modified Project would not result in any new or more severe significant impacts beyond what were identified in the Certified EIR.

3.6.4 Any New Information Requiring New Analysis or Verification?

No. There is no new information requiring new analysis or verification.

3.6.5 EIR's Mitigation Measures Addressing Impact

None required.

3.6.6 Conclusion

As discussed above, the Modified Project would not result in any of the conditions set forth in PRC Section 21166(c) or CEQA Guidelines Sections 15162 or 15163 that would require the preparation of a Supplemental or Subsequent EIR.

3.7 GEOLOGY AND SOILS

Issues (and supporting Information Sources)	Impact Determination in the Certified EIR	Do Proposed Changes Involve New Significant Impacts or Substantially More Severe Impacts?	Any New Circumstances Involving New Significant Impact or Substantially More Severe Impacts?	Any New Information Requiring New Analysis or Verification?	Certified EIR's Mitigation Measures Addressing Impacts
GEOLOGY AND SOILS: Would the project:					
(a) Directly or indirectly cause potential substantial adverse effects, including the risk or 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?	Less Than Significant	No	No	No	No
(ii)Strong seismic ground shaking?	Less Than Significant	No	No	No	No
(iii) Seismic-related ground failure, including liquefaction?	Less Than Significant	No	No	No	No
(iv) Landslides?	Less Than Significant	No	No	No	No
(b) Result in substantial soil erosion or the loss of topsoil?	Less Than Significant	No	No	No	No
(c) Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?	Less Than Significant	No	No	No	No
(d) 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?	Less Than Significant	No	No	No	No
(e) Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater?	No Impact	No	No	No	No
(f) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	Less Than Significant	No	No	No	No

Impacts related to geology and soils are discussed in the Certified EIR on pages 3.6-1 through 3.6-28.

3.7.1 Impact Determination in the EIR

(a.i) Would the Project directly or indirectly cause potential substantial adverse effects, including the risk or loss, injury or death involving 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?

The Certified EIR stated that 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 General Plan Update's policies adhere to state and local regulations, such as CBC requirements, to address these seismic hazards. Therefore, the Certified EIR concluded that the impact related to fault rupture would be less than significant.

(a.ii) Would the Project directly or indirectly cause potential substantial adverse effects, including the risk or loss, injury or death involving strong seismic ground shaking?

The Certified EIR stated that 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 the City could expect to feel potential ground shaking at a Modified Mercalli intensity of VII, very strong shaking with moderate damage, with a chance of damage at two to five percent. The General Plan Update 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 General Plan policies listed below would address any potential impacts associated with strong seismic ground shaking. Therefore, the Certified EIR concluded that the impact related to strong seismic ground shaking would be less than significant.

(a.iii) Would the Project directly or indirectly cause potential substantial adverse effects, including the risk or loss, injury or death involving seismic-related ground failure, including liquefaction?

The Certified EIR stated that the City 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, and development in these areas requires a geotechnical investigation report as part of the environmental and building permit process. 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 Certified EIR concluded that the impact related to liquefaction would be less than significant.

(a.iv) Would the Project directly or indirectly cause potential substantial adverse effects, including the risk or loss, injury or death involving landslides?

The Certified EIR stated that 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 General Plan Update would be addressed through site-specific geotechnical studies prepared in accordance with California Building Code (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 Certified EIR concluded the impact related to seismically-induced landslides would be less than significant.

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

The Certified EIR stated that development anticipated by the General Plan Update 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 General Plan Update 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 National Pollutant Discharge Elimination System (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 Certified EIR concluded that the impact related to soil erosion and topsoil loss would be less than significant with implementation of the General Plan policies below.

(c) Would the Project be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?

The Certified EIR concluded that some development allowed under the 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 the 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 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. The Certified EIR concluded that 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.

(d) Would the Project 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?

The Certified EIR stated that 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 generally have low to moderate shrink-swell potential, except for the Ramona clay loam, which has a high potential. Thus, development associated with the General Plan Update 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 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. The Certified EIR concluded that for these reasons, the impact related to hazards associated with expansive soils would be less than significant.

(e) Would the Project have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of waste water?

The Certified EIR stated that the entirety of the City is served by established wastewater conveyance and treatment services. Development allowed under the General Plan Update 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. The Certified EIR concluded that no impacts would occur.

(f) Would the Project directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?

The Certified EIR stated that future development proposals initiated under the 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.

The Los Angeles County Museum of History (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 prior to approval of project plans. If the paleontological study determined that the project had a high potential for encountering subsurface paleontological resources, then the City would incorporate Policy OSEC-P-13 as a project condition of approval, which requires resource monitoring and provides protocols if a paleontological resource is unearthed. Therefore, the Certified EIR concluded that the impact related to unique paleontological resources would be less than significant with adherence to the regulatory requirements in the General Plan policies.

General Plan Policies

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.

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.

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.

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.

3.7.2 Do Proposed Changes Involve New Significant Impacts or Substantially More Severe Impacts?

(a.i) Would the Project directly or indirectly cause potential substantial adverse effects, including the risk or loss, injury or death involving 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?

The Project Site is not located within the boundaries of the Alquist-Priolo Earthquake Fault Zoning Map, and no known faults exist at the site. Thus, the Modified Project would not directly or indirectly cause potential substantial adverse effects, including the risk or loss, injury or death involving 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. Therefore, the Modified Project would not result in new or increased significant impacts beyond those identified in the Certified EIR.

(a.ii) Would the Project directly or indirectly cause potential substantial adverse effects, including the risk or loss, injury or death involving strong seismic ground shaking?

The Project Site is located in a seismically active region and is experiences ground shaking during seismic events. As with all development in the state, the Modified Project would be required to comply with recommendations made in a Project-specific geotechnical report and all applicable Building Code standards, which would ensure the Modified Project would not directly or indirectly cause potential substantial adverse effects, including the risk or loss, injury or death involving strong seismic ground shaking. Therefore, the Modified Project would not result in new or increased significant impacts beyond those identified in the Certified EIR.

(a.iii) Would the Project directly or indirectly cause potential substantial adverse effects, including the risk or loss, injury or death involving seismic-related ground failure, including liquefaction?

The Project Site falls within the boundaries of a liquefaction zone. As with all development in the state, the Modified Project would be required to comply with recommendations made in a Project-specific geotechnical report and all applicable Building Code standards, which would ensure the Modified Project would not directly or indirectly cause potential substantial adverse effects, including the risk or loss, injury or death involving liquefaction. Therefore, the Modified Project would not result in new or increased significant impacts beyond those identified in the Certified EIR.

(a.iv) Would the Project directly or indirectly cause potential substantial adverse effects, including the risk or loss, injury or death involving landslides?

The Project Site and surrounding area are flat and do not contain landslides. Thus, the Modified Project would not directly or indirectly cause potential substantial adverse effects, including the risk or loss, injury or death involving landslides. Therefore, the Modified Project would not result in new or increased significant impacts beyond those identified in the Certified EIR.

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

In its existing condition, the Project Site and surrounding areas are completely developed with impervious surfaces (i.e., buildings, concrete, and asphalt). During both the Modified Project's construction and operational phases, the Modified Project would be required to comply with NPDES permit requirements, which prevent soil erosion and loss of topsoil. Thus, the Modified Project would not result in substantial soil erosion or the loss of topsoil. Therefore, the Modified Project would not result in new or increased significant impacts beyond those identified in the Certified EIR.

(c) Would the Project be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?

As discussed, the Project Site and surrounding area are flat and do not contain landslides. The Project Site falls within the boundaries of a liquefaction zone. As with all development in the state, the Modified Project would be required to comply with recommendations made in a Project-specific geotechnical report and all applicable Building Code standards, which would ensure the Modified Project would not 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. Therefore, the Modified Project would not result in new or increased significant impacts beyond those identified in the Certified EIR.

(d) Would the Project 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?

The Applicant would be required to prepare a Project-specific geotechnical report, which would identify whether soils at the site are expansive. As with all development in the state, the Modified Project would be required to comply with recommendations made in a Project-specific geotechnical report and all applicable Building Code standards, which would ensure the Modified Project if soils at the site are expansive, the Modified Project would not create a substantial direct or indirection risk to life or property. Therefore, the Modified Project would not result in new or increased significant impacts beyond those identified in the Certified EIR.

(e) Would the Project have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater?

The Modified Project would not use septic tanks or alternative wastewater disposal system. Thus, the Modified Project would not have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems. Therefore, the Modified Project would not result in new or increased significant impacts beyond those identified in the Certified EIR.

(f) Would the Project directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?

The Project Site is located in an urban area and is currently developed with Fab Cars and Trophy Automotive Dealer Group in five buildings (totaling approximately 104,000 square feet) and surface parking. The Modified Project includes development of an infill site with 315 residential dwelling units, allowed under the existing zoning and land use designation for the site and in accordance with the State Density Bonus law. It is possible that unknown paleontological resources exist at the Project Site. However, the Applicant would

be required to comply with the regulatory requirements in General Plan policies OSEC-P-12 and OSEC-P-13 if the Project would involve ground disturbance or excavations in undisturbed native soil, as also required by other projects analyzed in the Certified EIR Thus, the Modified Project would not directly or indirectly destroy a unique paleontological resource or site or unique geologic feature. Therefore, the Modified Project would not result in new or increased significant impacts beyond those identified in the Certified EIR.

3.7.3 Any New Circumstances Involving New Significant Impact or Substantially More Severe Impacts?

No. As discussed above, the Modified Project would not result in any new or more severe significant impacts beyond what were identified in the Certified EIR.

3.7.4 Any New Information Requiring New Analysis or Verification?

No. There is no new information requiring new analysis or verification.

3.7.5 EIR's Mitigation Measures Addressing Impact

None required.

3.7.6 Conclusion

As discussed above, the Modified Project would not result in any of the conditions set forth in PRC Section 21166(c) or CEQA Guidelines Sections 15162 or 15163 that would require the preparation of a Supplemental or Subsequent EIR.

3.8 GREENHOUSE GAS EMISSIONS

Issues (and supporting Information Sources)	Impact Determination in the Certified EIR	Do Proposed Changes Involve New Significant Impacts or Substantially More Severe Impacts?	Any New Circumstances Involving New Significant Impact or Substantially More Severe Impacts?	Any New Information Requiring New Analysis or Verification?	Certified EIR's Mitigation Measures Addressing Impacts
GREENHOUSE GAS EMISSIONS: Would the project:					
(a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?	Less Than Significant	No	No	No	No
(b) Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?	Less Than Significant	No	No	No	No

Impacts related to greenhouse gas emissions are discussed in the Certified EIR on pages 3.7-1 through 3.7-56.

3.8.1 Impact Determination in the EIR

(a) Would the Project generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?

(b) Would the Project conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?

Questions (a) and (b) were addressed together in the Certified EIR.

Construction

As discussed in the Certified EIR, the General Plan Update 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 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 approved or proposed under the General Plan Update, 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 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 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 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 carbon dioxide (CO_2), methane (CH_4), and nitrous oxide (N_2O), during future construction activities under the General Plan Update.

Operation

The Certified EIR stated that operation of future development under the 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. The net change in operational emissions from existing conditions compared to existing plus buildout of new development under the General Plan Update at 2040 buildout would be negative compared to existing conditions primarily due to the focus of the General Plan Update on infill development and revitalization to help the City 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 non-residential uses would be based on market demand and would be constructed over the buildout duration through 2040.

The General Plan policies, listed below, would reduce potential emissions from future new, as well as existing, development. In addition, future new development under the 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 General Plan Update 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.

The Certified EIR included a detailed analysis of the General Plan Update's consistency with the strategies outlined in the state's Climate Change Scoping Plan to reduce GHG emissions. The analysis concluded that the General Plan Update would not conflict with applicable 2017 Climate Change Scoping Plan strategies and regulations to reduce GHG emissions.

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. 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. It is reasonable to expect the GHG emissions from future development anticipated by the General Plan Update 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 Certified ERIR concluded that the General Plan Update 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." The 2020–2045 RTP/SCS seeks improved 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."

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." 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." 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," 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."

In order to assess the General Plan Update's potential to conflict with the 2020–2045 RTP/SCS, the Certified EIR included a detailed analysis of the 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 Certified EIR concluded that the General Plan Update would not conflict with the 2020–2045 RTP/SCS goals.

City of Carson Climate Action Plan

Through the City's EECAP, the City 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 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 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 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 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 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. The Certified EIR concluded that based on the information above, new development under the General Plan Update would comply with plans, policies and regulations for reducing GHG emissions and this impact would be less than significant.

General Plan Policies

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.

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-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 multifamily 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.

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.

3.8.2 Do Proposed Changes Involve New Significant Impacts or Substantially More Severe Impacts?

(a) Would the Project generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?

(b) Would the Project conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?

As with the Certified EIR, Questions (a) and (b) are addressed together.

Consistent with the Certified EIR, as a project under the General Plan update, the Modified Project is required to comply with applicable EPA, CARB and SCAQMD emissions standards, rules, and regulations. Furthermore, the Modified Project's

construction activities are required to comply with the CARB ATCM, which limits diesel powered equipment and vehicle idling to no more than five minutes at a location, 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.

The Modified Project would be required to comply with the General Plan policies listed below that would reduce the Modified Project's GHG emissions. Additionally, the Modified Project would comply with CALGreen energy-efficiency requirements, which would be consistent with EECAP goals for increasing energy and water use efficiency in new residential development.

Also, consistent with the Certified EIR, a Project-specific GHG emissions analysis was conducted (refer to Attachment B), which concluded that the Modified Project's GHG emissions impacts would be less than significant.

For these reasons, the Modified Project would not result in new or increased significant impacts beyond those identified in the Certified EIR.

3.8.3 Any New Circumstances Involving New Significant Impact or Substantially More Severe Impacts?

No. As discussed above, the Modified Project would not result in any new or more severe significant impacts beyond what were identified in the Certified EIR.

3.8.4 Any New Information Requiring New Analysis or Verification?

No. There is no new information requiring new analysis or verification.

3.8.5 EIR's Mitigation Measures Addressing Impact

None required.

3.8.6 Conclusion

As discussed above, the Modified Project would not result in any of the conditions set forth in PRC Section 21166(c) or CEQA Guidelines Sections 15162 or 15163 that would require the preparation of a Supplemental or Subsequent EIR.

3.9 HAZARDS AND HAZARDOUS MATERIALS

Issues (and supporting Information Sources)	Impact Determination in the Certified EIR	Do Proposed Changes Involve New Significant Impacts or Substantially More Severe Impacts?	Any New Circumstances Involving New Significant Impact or Substantially More Severe Impacts?	Any New Information Requiring New Analysis or Verification?	Certified EIR's Mitigation Measures Addressing Impacts
HAZARDS AND HAZARDOUS MATERIALS: Would the project:					
(a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?	Less Than Significant	No	No	No	No
(b) Create a significant hazard to the public or the environment through the reasonably foreseeable upset and accident conditions involving the likely release of hazardous materials into the environment?	Less Than Significant	No	No	No	No
(c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?	Less Than Significant	No	No	No	No
(d) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code §65962.5 and, as a result, would it create a significant hazard to the public or the environment?	Less Than Significant	No	No	No	No
(e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard or excessive noise for people residing or working in the project area?	No Impact	No	No	No	No
(f) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	Less Than Significant	No	No	No	No
(g) Expose people or structures either directly or indirectly to a significant risk of loss, injury or death involving wildland fires?	No Impact	No	No	No	No

Impacts related to hazards and hazardous materials are discussed in the Certified EIR on pages 3.8-1 through 3.8-38.

3.9.1 Impact Determination in the EIR

(a) Would the Project create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?

(b) Would the Project create a significant hazard to the public or the environment through the reasonably foreseeable upset and accident conditions involving the likely release of hazardous materials into the environment?

Questions (a) and (b) were addressed together in the Certified EIR.

Construction

As discussed in the Certified EIR, 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 hazardous materials business plans (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 Certified Unified Program Agency (CUPA), Los Angeles County Fire Department (LACFD) Health Hazardous Materials Division (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 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 US Department of Transportation (USDOT), Caltrans, and the California Highway Patrol (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. Some buildings and structures may include hazardous building materials, such as asbestos-containing materials (ACM), lead-based paint (LBP), polychlorinated biphenyls (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.

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. The Certified EIR concluded that 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

As discussed in the Certified EIR, once constructed, projects operating within the City 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 Low Impact Development (LID)/post-construction standards.

The 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. The Certified EIR concluded that 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.

(c) Would the Project emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?

As discussed in the Certified EIR, there are numerous schools within the City limits, and many projects associated with the General Plan Update would likely be located within one-quarter mile of one or more schools. The construction and operations activities discussed previously 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, required compliance with the numerous laws and regulations that govern the transportation, use, handling, and disposal of hazardous materials and adherence with 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 CSESP- 35 would limit the potential for creation of hazardous conditions due to the use or accidental release of hazardous materials, and as concluded in the Certified EIR, would render this impact less than significant.

(d) Would the Project be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code §65962.5 and, as a result, would it create a significant hazard to the public or the environment?

As discussed in the Certified EIR, 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 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 Certified EIR concluded the impact would be less than significant.

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

As discussed in the Certified EIR, 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 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 General Plan Update would not place people or structures in such a manner as to create a safety or noise hazard. The Certified EIR concluded the impact would therefore be less than significant.

(f) Would the Project impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?

As discussed in the Certified EIR, the 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 Certified EIR concluded the impact relative to proximity to an emergency response or evacuation would be less than significant.

(g) Would the Project expose people or structures either directly or indirectly to a significant risk of loss, injury or death involving wildland fires?

As discussed in the Certified EIR, according to the map of Very Fire Hazard Severity Zones in LRA for Los Angeles County, the City 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, 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 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 Certified EIR concluded that the operation of projects would not substantially increase the risk of wildland fires within the project area. For these reasons, the General Plan Update 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.

General Plan Policies

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 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.

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 [Certified] 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.

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.

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.

3.9.2 Do Proposed Changes Involve New Significant Impacts or Substantially More Severe Impacts?

(a) Would the Project create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?

(b) Would the Project create a significant hazard to the public or the environment through the reasonably foreseeable upset and accident conditions involving the likely release of hazardous materials into the environment?

As with the Certified EIR, questions (a) and (b) are addressed together.

The Project Site is located in an urban area and is currently developed with Fab Cars and Trophy Automotive Dealer Group in five buildings (totaling approximately 104,000 square feet) and surface parking. The Modified Project includes development of an infill site with 315 residential dwelling units, allowed under the existing zoning and land use designation for the site and in accordance with the State Density Bonus law. As a residential development, the Modified Project's construction and operational phases would use typical potentially hazardous materials, such as paint, petroleum products, and cleaning products. Consistent with the Certified EIR, all of the Modified Project's construction and operational activities would be required to comply with the numerous laws and regulations discussed in the Certified EIR 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, in addition to applicable General Plan update policies (listed above). Thus, the Modified Project would not create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials. Therefore, the Modified Project would not result in new or increased significant impacts beyond those identified in the Certified EIR.

(c) Would the Project emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?

The Project Site is located in an urban area and is currently developed with Fab Cars and Trophy Automotive Dealer Group in five buildings (totaling approximately 104,000 square feet) and surface parking. There are no existing or proposed schools within 0.25 miles of the Project Site. The school closest to the site is the Golden Wings Academy located approximately 0.3 miles to the south. The Modified Project includes development of an infill site with 315 residential dwelling units, allowed under the existing zoning and land use designation for the site and in accordance with the State Density Bonus law. As a residential development, the Modified Project's construction and operational phases

would use typical potentially hazardous materials, such as paint, petroleum products, and cleaning products. Consistent with the Certified EIR, all of the Modified Project's construction and operational activities would be required to comply with the numerous laws and regulations discussed in the Certified EIR 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, in addition to applicable General Plan update policies (listed above). Thus, the Modified Project would not emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school. Therefore, the Modified Project would not result in new or increased significant impacts beyond those identified in the Certified EIR.

(d) Would the Project be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code §65962.5 and, as a result, would it create a significant hazard to the public or the environment?

The Project Site is not included on a list of hazardous materials sites compiled pursuant to Government Code §65962.5.[1] Therefore, the Modified Project would not result in new or increased significant impacts beyond those identified in the Certified EIR.

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

The Project Site is not located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport. Therefore, the Modified Project would not result in new or increased significant impacts beyond those identified in the Certified EIR.

(f) Would the Project impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?

The Modified Project includes development of an infill site with 315 residential dwelling units, allowed under the existing zoning and land use designation for the site and in accordance with the State Density Bonus law. The Modified Project would not alter any existing roadways and would provide adequate driveway widths, and road clearances around structures consistent with local and State requirements to ensure adequate emergency access. Thus, the Modified Project would not impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan. Therefore, the Modified Project would not result in new or increased significant impacts beyond those identified in the Certified EIR.

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1 *Envirostor, https://www.envirostor.dtsc.ca.gov/public/map/?global_id=60000842&zl=12, accessed September 17, 2024*

(g) Would the Project expose people or structures either directly or indirectly to a significant risk of loss, injury or death involving wildland fires?

The Project Site is located in an urban area that is not subject to wildland fires. Thus, the Modified Project would not expose people or structures either directly or indirectly to a significant risk of loss, injury or death involving wildland fires. Therefore, the Modified Project would not result in new or increased significant impacts beyond those identified in the Certified EIR.

3.9.3 Any New Circumstances Involving New Significant Impact or Substantially More Severe Impacts?

No. As discussed above, the Modified Project would not result in any new or more severe significant impacts beyond what were identified in the Certified EIR.

3.9.4 Any New Information Requiring New Analysis or Verification?

No. There is no new information requiring new analysis or verification.

3.9.5 EIR's Mitigation Measures Addressing Impact

None required.

3.9.6 Conclusion

As discussed above, the Modified Project would not result in any of the conditions set forth in PRC Section 21166(c) or CEQA Guidelines Sections 15162 or 15163 that would require the preparation of a Supplemental or Subsequent EIR.

3.10 HYDROLOGY AND WATER QUALITY

Issues (and supporting Information Sources)	Impact Determination in the Certified EIR	Do Proposed Changes Involve New Significant Impacts or Substantially More Severe Impacts?	Any New Circumstances Involving New Significant Impact or Substantially More Severe Impacts?	Any New Information Requiring New Analysis or Verification?	Certified EIR's Mitigation Measures Addressing Impacts
HYDROLOGY AND WATER QUALITY: Would the project:					
(a) Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or groundwater quality?	Less Than Significant	No	No	No	No
(b) Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?	Less Than Significant	No	No	No	No
(c) 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?	Less Than Significant	No	No	No	No
(ii) Substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site?	Less Than Significant	No	No	No	No
(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?	Less Than Significant	No	No	No	No
(iv) Impede or redirect flood flows?	Less Than Significant	No	No	No	No
(d) In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation?	Less Than Significant	No	No	No	No
(e) Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?	Less Than Significant	No	No	No	No

Impacts related to hydrology and water quality are discussed in the Certified EIR on pages 3.9-1 through 3.9-28.

3.10.1 Impact Determination in the EIR

(a) Would the Project violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or groundwater quality?

As discussed in the Certified EIR, the 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 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 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, 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 General Plan Update contains policies that require the City 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 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.

The Certified EIR concluded that for the reasons stated above, the 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.

(b) Would the Project substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?

As discussed in the Certified EIR, a small portion of the City's potable water supply relies on groundwater. However, 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 General Plan Update would not result in substantial increases of impervious surfaces such that groundwater recharge would be hindered. Additionally, 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. The Certified EIR concluded that for these reasons, the impact of the General Plan Update with respect to the depletion of groundwater supplies or interference with groundwater recharge would be less than significant.

(c.i) Would the Project 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 result in substantial erosion or siltation on- or off-site?

(c.ii) Would the Project 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 substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site?

(c.iii) Would the Project 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 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?

(c.iv) Would the Project substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would impede or redirect flood flows?

Questions (c.i) through (c.iv) were addressed together in the Certified EIR.

As discussed in the Certified EIR, implementation of the 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 General Plan Update could impact the existing drainage system. While the City is largely built out, potential development and redevelopment under the 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. Any development that would occur under the 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 General Plan Update, reducing siltation and erosion. In addition, the 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. The Certified EIR concluded that for these reasons, the impact of the General Plan Update with respect to the alteration of drainage patterns would be less than significant.

(d) Would the Project in flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation?

As discussed in the Certified EIR, the City is located approximately six miles inland from the Pacific Ocean and two miles inland from the Los Angeles/Long Beach Harbor area. 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. In addition, a vast majority of the City is outside of the flood hazard zone. Finally, development anticipated in the General Plan Update would comply with the City's existing regulations pertaining to flooding hazards and adhere to previously described General Plan policies addressing flooding. Therefore, the Certified EIR concluded that the impact of the General Plan Update with respect to flood hazard zones would be less than significant.

(e) Would the Project conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?

As discussed in the Certified EIR, development anticipated by the General Plan Update could potentially degrade water quality. However, development would be subject to the RWQCB requirements and the Carson Municipal Code. Furthermore, the General Plan Update contains policies pertaining to water quality, as described previously. Overall, the 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. Adjudicated basins are not required to prepare Groundwater Sustainability Plans (GSPs) but are required to submit annual basin reports to fulfill Sustainable Groundwater Management Act (SGMA) requirements. As a result, no GSP has been prepared for either the West Coast or Central Basins. Therefore, the Certified EIR concluded that the impact of the General Plan Update with respect to a conflict with a water quality control plan or a GSP would be less than significant.

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.

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.

3.10.2 Do Proposed Changes Involve New Significant Impacts or Substantially More Severe Impacts?

(a) Would the Project violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or groundwater quality?

The Modified Project would be required to comply with the water quality regulations discussed above, which would ensure the Modified Project would not violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or groundwater quality. Therefore, the Modified Project would not result in new or increased significant impacts beyond those identified in the Certified EIR.

(b) Would the Project substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?

In its existing condition, the Project Site is completely impervious. During storm events, water flows across the site to the local storm drain. Water that encounters the site does not reach groundwater level. This condition would not change substantially under the

Modified Project. Thus, the Modified Project would not substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin. Therefore, the Modified Project would not result in new or increased significant impacts beyond those identified in the Certified EIR.

(c.i) Would the Project 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 result in substantial erosion or siltation on- or off-site?

(c.ii) Would the Project 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 substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site?

(c.iii) Would the Project 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 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?

(c.iv) Would the Project substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would impede or redirect flood flows?

As with the Certified EIR, questions (c.i) through (c.iv) are addressed together.

In its existing condition, the Project Site is completely impervious. During storm events, water flows across the site to the local storm drain and does not encounter bare soil. This condition would not change substantially under the Modified Project, and the Modified Project would not require additional storm drain capacity. Thus, the Modified Project would not substantially alter the existing drainage pattern of the site or area that would cause flooding, exceed storm drain capacity, or redirect flood flows. Therefore, the Modified Project would not result in new or increased significant impacts beyond those identified in the Certified EIR.

(d) Would the Project result in flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation?

The Project Site is not located near any large bodies of water. Thus, the Modified Project would not result in flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation. Therefore, the Modified Project would not result in new or increased significant impacts beyond those identified in the Certified EIR.

(e) Would the Project conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?

In its existing condition, the Project Site is completely impervious. During storm events, water flows across the site to the local storm drain. Water that encounters the site does not reach groundwater level. This condition would not change substantially under the Modified Project. Additionally, the Modified Project would comply with all applicable water quality regulations. Thus, the Modified Project would not conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan. Therefore, the Modified Project would not result in new or increased significant impacts beyond those identified in the Certified EIR.

3.10.3 Any New Circumstances Involving New Significant Impact or Substantially More Severe Impacts?

No. As discussed above, the Modified Project would not result in any new or more severe significant impacts beyond what were identified in the Certified EIR.

3.10.4 Any New Information Requiring New Analysis or Verification?

No. There is no new information requiring new analysis or verification.

3.10.5 EIR's Mitigation Measures Addressing Impact

None required.

3.10.6 Conclusion

As discussed above, the Modified Project would not result in any of the conditions set forth in PRC Section 21166(c) or CEQA Guidelines Sections 15162 or 15163 that would require the preparation of a Supplemental or Subsequent EIR.

3.11 LAND USE AND PLANNING

Issues (and supporting Information Sources)	Impact Determination in the Certified EIR	Do Proposed Changes Involve New Significant Impacts or Substantially More Severe Impacts?	Any New Circumstances Involving New Significant Impact or Substantially More Severe Impacts?	Any New Information Requiring New Analysis or Verification?	Certified EIR's Mitigation Measures Addressing Impacts
LAND USE AND PLANNING: Would the project:					
(a) Physically divide an established community?	Less Than Significant	No	No	No	No
(b) 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	No	No	No	No

Impacts related to land use and planning are discussed in the Certified EIR on pages 3.10-1 through 3.10-18.

3.11.1 Impact Determination in the EIR

(a) Would the Project physically divide an established community?

As discussed in the Certified EIR, the General Plan Update 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 General Plan Update would consolidate designations to better reflect existing land uses and would not result in the division of any established community. Therefore, the Certified EIR concluded that future development allowed by the General Plan Update would not physically divide an established community, and the impact is less than significant.

(b) Would the Project 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 discussed in the Certified EIR, 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 General Plan Update, if it were adopted Additionally, the City's Zoning Ordinance would be revised to implement the General Plan Update, as required by state law (Government Code Section 65860[a]), and it would translate the General Plan policies into specific use regulations, development standards, and performance criteria to govern development on individual properties. The Zoning Ordinance ultimately prescribes standards, rules, and procedures for development, while the Zoning Map will provide more detail than the General Plan Land Use Diagram. The 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 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 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 "Flex District" in place of "Light Industrial" to reflect existing office uses at that location. As such, redesignation under the 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. 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 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 General Plan Update also must be consistent with regional and local plans. Policies within the General Plan Update integrate land use, housing, and transportation planning to achieve regional GHG emission reductions by promoting compact, infill, and mixed-use development, therefore supporting the Sustainable Communities Strategy (Connect SoCal). Moreover, General Plan policies encourage remediation and redevelopment of brownfield sites, improving the environmental quality of lands in the Planning Area. Additionally, the General Plan Update seeks to maintain consistency with the policies of the Los Angeles County General Plan and the Code of Ordinances. The 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. 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 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.

The Certified EIR concluded that given that the 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.

General Plan Policies

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.

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.

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 identify.

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.

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.

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.

3.11.2 Do Proposed Changes Involve New Significant Impacts or Substantially More Severe Impacts?

(a) Would the Project physically divide an established community?

The Project Site is located in a well-established, urban area and is currently developed with Fab Cars and Trophy Automotive Dealer Group in five buildings (totaling approximately 104,000 square feet) and surface parking. The Modified Project includes development of an infill site with 315 residential dwelling units, allowed under the existing zoning and land use designation for the site and in accordance with the State Density Bonus law. The Modified Project would not include development outside of the established boundaries of the Project Site. Thus, the Modified Project would not physically divide an established community. Therefore, the Modified Project would not result in new or increased significant impacts beyond those identified in the Certified EIR.

(b) Would the Project 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?

The Project Site is located in a well-established, urban area and is currently developed with Fab Cars and Trophy Automotive Dealer Group in five buildings (totaling approximately 104,000 square feet) and surface parking. The Modified Project includes development of an infill site with 315 residential dwelling units, allowed under the existing zoning and land use designation for the site and in accordance with the State Density Bonus law. The Modified Project would be consistent with all applicable General Plan policies. Thus, the Modified 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. Therefore, the Modified Project would not result in new or increased significant impacts beyond those identified in the Certified EIR.

3.11.3 Any New Circumstances Involving New Significant Impact or Substantially More Severe Impacts?

No. As discussed above, the Modified Project would not result in any new or more severe significant impacts beyond what were identified in the Certified EIR.

3.11.4 Any New Information Requiring New Analysis or Verification?

No. There is no new information requiring new analysis or verification.

3.11.5 EIR's Mitigation Measures Addressing Impact

None required.

3.11.6 Conclusion

As discussed above, the Modified Project would not result in any of the conditions set forth in PRC Section 21166(c) or CEQA Guidelines Sections 15162 or 15163 that would require the preparation of a Supplemental or Subsequent EIR.

3.12 MINERAL RESOURCES

Issues (and supporting Information Sources)	Impact Determination in the Certified EIR	Do Proposed Changes Involve New Significant Impacts or Substantially More Severe Impacts?	Any New Circumstances Involving New Significant Impact or Substantially More Severe Impacts?	Any New Information Requiring New Analysis or Verification?	Certified EIR's Mitigation Measures Addressing Impacts
MINERAL RESOURCES: Would the project:					
(a) 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?	No Impact	No	No	No	No
(b) Result in the loss of availability of a locally-important mineral resource recovery site delineated on local general plan, specific plan or other land use plan?	No Impact	No	No	No	No

Impacts related to mineral resources are discussed in the Certified EIR on page 5-3.

3.12.1 Impact Determination in the EIR

(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?

As discussed in the Certified EIR, portions of the City are located within the Dominguez and Wilmington Oil Fields. As a result, there are large areas of the City devoted to the management and production of oil and petroleum products. The General Plan Update 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. The Certified EIR concluded that no impacts would occur.

(b) Would the Project result in the loss of availability of a locally-important mineral resource recovery site delineated on local general plan, specific plan or other land use plan?

As in the Certified EIR, there are large areas of the City devoted to the management and production of oil and petroleum products. However, implementation of the General Plan Update would not affect areas which are dedicated to oil and petroleum production. The Certified EIR concluded that no impacts would occur.

General Plan Policies

None.

Mitigation Measures

None.

3.12.2 Do Proposed Changes Involve New Significant Impacts or Substantially More Severe Impacts?

(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?

The Project Site is not located in the area of the City with oil production. Thus, the Modified Project would not 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. Therefore, the Modified Project would not result in new or increased significant impacts beyond those identified in the Certified EIR.

(b) Would the Project result in the loss of availability of a locally-important mineral resource recovery site delineated on local general plan, specific plan or other land use plan?

The Project Site is not located in the area of the City with oil production. Thus, the Modified Project would not result in the loss of availability of a locally-important mineral resource recovery site delineated on local general plan, specific plan or other land use plan. Therefore, the Modified Project would not result in new or increased significant impacts beyond those identified in the Certified EIR.

3.12.3 Any New Circumstances Involving New Significant Impact or Substantially More Severe Impacts?

No. As discussed above, the Modified Project would not result in any new or more severe significant impacts beyond what were identified in the Certified EIR.

3.12.4 Any New Information Requiring New Analysis or Verification?

No. There is no new information requiring new analysis or verification.

3.12.5 EIR's Mitigation Measures Addressing Impact

None required.

3.12.6 Conclusion

As discussed above, the Modified Project would not result in any of the conditions set forth in PRC Section 21166(c) or CEQA Guidelines Sections 15162 or 15163 that would require the preparation of a Supplemental or Subsequent EIR.

3.13 NOISE

Issues (and supporting Information Sources)	Impact Determination in the Certified EIR	Do Proposed Changes Involve New Significant Impacts or Substantially More Severe Impacts?	Any New Circumstances Involving New Significant Impact or Substantially More Severe Impacts?	Any New Information Requiring New Analysis or Verification?	Certified EIR's Mitigation Measures Addressing Impacts
NOISE: Would the project result in:					
(a) Generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?	Less Than Significant	No	No	No	No
(b) Generation of excessive groundborne vibration or groundborne noise levels?	Less Than Significant	No	No	No	No
(c) 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?	No Impact	No	No	No	No

Impacts related to noise are discussed in the Certified EIR on pages 3.11-1 through 3.11-42.

3.13.1 Impact Determination in the EIR

(a) Would the Project 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?

Construction Noise

As discussed in the Certified EIR, construction of future development under the 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. These maximum noise levels would occur when equipment is operating at full power.

The exact locations of future projects and construction that would be implemented under the 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 General Plan Update, it is assumed that individual projects would be implemented in compliance with the City standards. Future development under the General Plan Update would be required to comply with the restrictions of the Carson Municipal Code. In addition, future development under the 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 Certified EIR concluded the impact from construction noise would be less than significant.

Traffic Noise

As discussed in the Certified EIR, future development under the 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 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. 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 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.

Railway Noise

As discussed in the Certified EIR, 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 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 Certified EIR concluded that the impact from railway noise would be less than significant.

Stationary Noise

As discussed in the Certified EIR, future development under the 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 General Plan Update could expose existing and new sensitive receptors to stationary noise sources associated with industrial uses. Any new development under the General Plan Update would be subject to the Carson Municipal Code noise control ordinance and to the General Plan policies aimed at reducing noise levels from adjacent properties. The Certified EIR concluded that through compliance with the Carson Municipal Code noise control ordinance and General Plan policies, the impact from stationary noise would be less than significant.

(b) Would the Project result in the generation of excessive groundborne vibration or groundborne noise levels?

Construction

Human Annoyance

As discussed in the Certified EIR, the use of large bulldozers and loaded trucks for construction would generate the highest groundborne vibration levels on a typical construction site. 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.

The exact locations of future projects and construction that would be implemented under the 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 General Plan Update, it is assumed that individual projects would be implemented in compliance with applicable standards. In addition, future development under the 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

As discussed in the Certified EIR, 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. Construction activities such as the use of a large bulldozer, would be required to not operate The exact locations of future projects and construction that would be implemented under the 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 General Plan Update, it is assumed that individual projects would be implemented in compliance with applicable standards. In addition, future development under the 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 Certified EIR concluded that the impact of vibration to buildings during construction would be less than significant.

Traffic

As discussed in the Certified EIR, Vehicular traffic would generate groundborne vibration and under the 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. The vibration levels from traffic would be well below the thresholds for structural damage. Therefore, the Certified EIR concluded that the impact to sensitive receptors and buildings from vibration generated by traffic would be less than significant.

Railway

As discussed in the Certified EIR, The operation of freight trains along the Alameda corridor currently generates vibration. The 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 Transportation Noise and Vibration Manual. 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 Certified EIR concluded that the impact to sensitive receptors and buildings from vibration generated by rail traffic would be less than significant.

(c) 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?

As discussed in the Certified EIR, the City 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 Angles 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, the Certified EIR concluded that implementation of the 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.

General Plan Policies

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.

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 nonindustrial 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.

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.

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.

3.13.2 Do Proposed Changes Involve New Significant Impacts or Substantially More Severe Impacts?

(a) Would the Project 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?

The Project Site is located in an urban area and is currently developed with Fab Cars and Trophy Automotive Dealer Group in five buildings (totaling approximately 104,000 square feet) and surface parking. The Modified Project includes development of an infill site with 315 residential dwelling units, allowed under the existing zoning and land use designation for the site and in accordance with the State Density Bonus law. The Modified Project's construction and operational activities would generate noise. Consistent with the Certified EIR, a noise impact analysis was conducted for the Modified Project (refer to Attachment C) that demonstrates the Modified Project would not result in any significant noise impacts. Thus, the Modified 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. Therefore, the Modified Project would not result in new or increased significant impacts beyond those identified in the Certified EIR.

(b) Would the Project result in the generation of excessive groundborne vibration or groundborne noise levels?

The Project Site is located in an urban area and is currently developed with Fab Cars and Trophy Automotive Dealer Group in five buildings (totaling approximately 104,000 square feet) and surface parking. The Modified Project includes development of an infill site with 315 residential dwelling units, allowed under the existing zoning and land use designation for the site and in accordance with the State Density Bonus law. The Modified Project's construction activities would generate groundborne vibration. (As a residential development, the Modified Project's operation activities would not generate groundborne vibration.) Consistent with the Certified EIR, a groundborne vibration impact analysis was prepared for the Modified Project (refer to Attachment D) that demonstrates the Modified Project would not result in any significant groundborne vibration impacts. Thus, the Modified Project would not result in the generation of excessive groundborne vibration or groundborne noise levels. Therefore, the Modified Project would not result in new or increased significant impacts beyond those identified in the Certified EIR.

(c) 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?

The Project Site is not located in 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. Thus, the Modified Project would not expose people residing or working in the project area to excessive noise levels. Therefore, the Modified Project would not result in new or increased significant impacts beyond those identified in the Certified EIR.

3.13.3 Any New Circumstances Involving New Significant Impact or Substantially More Severe Impacts?

No. As discussed above, the Modified Project would not result in any new or more severe significant impacts beyond what were identified in the Certified EIR.

3.13.4 Any New Information Requiring New Analysis or Verification?

No. There is no new information requiring new analysis or verification.

3.13.5 EIR's Mitigation Measures Addressing Impact

None required.

3.13.6 Conclusion

As discussed above, the Modified Project would not result in any of the conditions set forth in PRC Section 21166(c) or CEQA Guidelines Sections 15162 or 15163 that would require the preparation of a Supplemental or Subsequent EIR.

3.14 POPULATION AND HOUSING

Issues (and supporting Information Sources)	Impact Determination in the Certified EIR	Do Proposed Changes Involve New Significant Impacts or Substantially More Severe Impacts?	Any New Circumstances Involving New Significant Impact or Substantially More Severe Impacts?	Any New Information Requiring New Analysis or Verification?	Certified EIR's Mitigation Measures Addressing Impacts
POPULATION AND HOUSING: Would the project:					
(a) Induce substantial unplanned population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?	Less Than Significant	No	No	No	No
(b) Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?	Less Than Significant	No	No	No	No

Impacts related to population and housing are discussed in the Certified EIR on pages 3.12-1 through 3.12-12.

3.14.1 Impact Determination in the EIR

(a) Would the Project induce substantial unplanned population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?

As discussed in the Certified EIR, the City has a Regional Housing Needs Assessment (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 General Plan Update'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 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, 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 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 Certified EIR concluded that the General Plan Update would not induce substantial unplanned population growth, either directly or indirectly, and this impact is considered less than significant.

(b) Would the Project displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?

As discussed in the Certified EIR, 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 General Plan Update. The General Plan Update 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 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 General Plan Update 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 General Plan Update, 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 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 General Plan Update includes policies that support these objectives, including those that seek to ensure equity and protect diversity in Carson's communities.

The Certified EIR concluded that for these reasons, growth anticipated under the 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.

General Plan Policies

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

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.

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.

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.

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.

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.

3.14.2 Do Proposed Changes Involve New Significant Impacts or Substantially More Severe Impacts?

(a) Would the Project induce substantial unplanned population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?

The Project Site is located in an urban area and is currently developed with Fab Cars and Trophy Automotive Dealer Group in five buildings (totaling approximately 104,000 square feet) and surface parking. The Modified Project includes development of an infill site with

315 residential dwelling units, allowed under the existing zoning and land use designation for the site and in accordance with the State Density Bonus law. The Modified Project would help the City meet its RHNA obligation of 5,618 new housing units. The Modified Project does not include the development of any new roadways or utility infrastructure. Thus, the Modified Project would not 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). Therefore, the Modified Project would not result in new or increased significant impacts beyond those identified in the Certified EIR.

(b) Would the Project displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?

The Project Site is located in an urban area and is currently developed with Fab Cars and Trophy Automotive Dealer Group in five buildings (totaling approximately 104,000 square feet) and surface parking. No housing is located on the site. Thus, the Modified Project would not displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere. Therefore, the Modified Project would not result in new or increased significant impacts beyond those identified in the Certified EIR.

3.14.3 Any New Circumstances Involving New Significant Impact or Substantially More Severe Impacts?

No. As discussed above, the Modified Project would not result in any new or more severe significant impacts beyond what were identified in the Certified EIR.

3.14.4 Any New Information Requiring New Analysis or Verification?

No. There is no new information requiring new analysis or verification.

3.14.5 EIR's Mitigation Measures Addressing Impact

None required.

3.14.6 Conclusion

As discussed above, the Modified Project would not result in any of the conditions set forth in PRC Section 21166(c) or CEQA Guidelines Sections 15162 or 15163 that would require the preparation of a Supplemental or Subsequent EIR.

3.15 PUBLIC SERVICES

Issues (and supporting Information Sources)	Impact Determination in the Certified EIR	Do Proposed Changes Involve New Significant Impacts or Substantially More Severe Impacts?	Any New Circumstances Involving New Significant Impact or Substantially More Severe Impacts?	Any New Information Requiring New Analysis or Verification?	Certified EIR's Mitigation Measures Addressing Impacts
PUBLIC SERVICES: Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services:					
(a) Fire protection?	Less Than Significant	No	No	No	No
(b) Police protection?	Less Than Significant	No	No	No	No
(c) Schools?	Less Than Significant	No	No	No	No
(d) Parks?	Less Than Significant	No	No	No	No
(e) Other public facilities?	Less Than Significant	No	No	No	No

Impacts related to public services are discussed in the Certified EIR on pages 3.13-1 through 3.13-14.

3.15.1 Impact Determination in the EIR

Would the Project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services

(a) Fire Protection?

As discussed in the Certified EIR, 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 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 General Plan Update.

Existing City and County of Los Angeles policies would minimize calls for fire protection services. The Fire Prevention Code of the City adopts an amended version of the County's fire code, which itself constitutes an amended version of the California Fire Code. The City is a Local Responsibility Area (LRA) but does not contain any FHSZs, and most fire hazards in the Planning Area are characterized as urban fires. Policies included in the General Plan Update 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 General Plan Update 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 General Plan Update would be located near the City's core and along major corridors. Furthermore, 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 General Plan Update 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 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. 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. The Certified EIR concluded that due to the minimal effects that the development of new facilities could have on the environment with compliance with existing regulations and 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 General Plan Update with respect to fire protection is considered less than significant.

(b) Police Protection?

As discussed in the Certified EIR, no new police service facilities are included in the General Plan Update. However, the Los Angeles County Sheriff's Department (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. There are approximately 1.9 officers per 1,000 residents in Carson as of 2020. While the General Plan Update would result in additional population that might increase demand for service, policies would reduce the need for additional police services. The General Plan Update 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, policies promote compact development patterns achieved through infill development and revitalization of mixed-use areas in the core and along key corridors. Thus, potential future development would be located close to the existing police station. Furthermore, 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 General Plan Update 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 General Plan Update that would address potential impacts of siting, construction, and operation of new facilities to the extent assessed in other sections of this EIR. 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.

The Certified EIR concluded that due to the minimal effects that the development of new facilities would have on the environment with compliance with existing regulations and General Plan Update 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 General Plan Update with respect to police services is considered less than significant.

(c) Schools?

As discussed in the Certified EIR, the General Plan Update anticipates the construction of up to 13,710 new potential housing units in the Planning Area by 2040. The General Plan Update 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 General Plan Update. Although capacity at existing facilities is estimated to be sufficient to accommodate future publics-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 California Department of Education (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 General Plan Update 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 General Plan Update that would address potential impacts of siting, construction, and operation of new facilities. 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 Los Angeles Unified School District (LAUSD) and the Carson Unified School District (CUSD) would continue to collect development impact fees throughout implementation of the General Plan Update, 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 Senate Bill (SB) 50.

The Certified EIR concluded that 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 General Plan Update's policies, and that all new development would pay school impact fees, the impact of the General Plan Update with respect to public school facilities is considered less than significant.

(d) Parks?

As discussed in the Certified EIR, the General Plan Update 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 General Plan Update 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 Certified EIR concluded that the impact of the General Plan Update with respect to park and recreation facilities is considered less than significant.

(e) Other Public Facilities?

As discussed in the Certified EIR, the anticipated growth associated with implementation of the General Plan Update may have an impact related to other public facilities, such as administrative facilities and libraries. The General Plan Update 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 General Plan Update 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 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. 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. The Certified EIR concluded that due to the minimal effects that the development of new facilities would have on the environment with compliance with existing regulations and General Plan policies, the impact of the General Plan Update with respect to public facilities is considered less than significant.

General Plan Policies

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.

3.15.2 Do Proposed Changes Involve New Significant Impacts or Substantially More Severe Impacts?

Would the Project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services:

(a) Fire Protection?

The Project Site is located in an urban area and is currently developed with Fab Cars and Trophy Automotive Dealer Group in five buildings (totaling approximately 104,000 square feet) and surface parking. County of Los Angeles Fire Station 36, located at 127 West 223rd Street approximately 1.8 miles southwest of the Project Site, is the fire station closest to the site. The Modified Project includes development of an infill site with 315 residential dwelling units, allowed under the existing zoning and land use designation for the site and in accordance with the State Density Bonus law. The Modified Project would help the City meet its RHNA obligation of 5,618 new housing units and as such, the Modified Project's population increase would fall within the net service population

increase of 43,600 residents by 2040 considered in the impact analysis in the Certified EIR and would not create a demand for fire protection not already considered in the Certified EIR. Additionally, the Modified Project would be required to comply with all applicable Fire Code regulations, which would reduce the demand for fire protection services. Thus, the Modified Project would not result in substantial adverse physical impacts associated with the provision of new or physically altered fire protection facilities, need for new or physically altered fire protection facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the fire protection services. Therefore, the Modified Project would not result in new or increased significant impacts beyond those identified in the Certified EIR.

(b) Police Protection?

The Project Site is located in an urban area and is currently developed with Fab Cars and Trophy Automotive Dealer Group in five buildings (totaling approximately 104,000 square feet) and surface parking. The Modified Project includes development of an infill site with 315 residential dwelling units, allowed under the existing zoning and land use designation for the site and in accordance with the State Density Bonus law. The Modified Project would help the City meet its RHNA obligation of 5,618 new housing units and as such, the Modified Project's population increase would fall within the net service population increase of 43,600 residents by 2040 considered in the impact analysis in the Certified EIR and would not create a demand for police protection not already considered in the Certified EIR. Additionally, the Modified Project would include security features such as controlled access and lighting and would comply with emergency access requirements, all of which would reduce the demand for police protection services. Thus, the Modified Project would not result in substantial adverse physical impacts associated with the provision of new or physically altered police protection facilities, need for new or physically altered police protection facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the police protection services. Therefore, the Modified Project would not result in new or increased significant impacts beyond those identified in the Certified EIR.

(c) Schools?

The Project Site is located in an urban area and is currently developed with Fab Cars and Trophy Automotive Dealer Group in five buildings (totaling approximately 104,000 square feet) and surface parking. The Modified Project includes development of an infill site with 315 residential dwelling units, allowed under the existing zoning and land use designation for the site and in accordance with the State Density Bonus law. The Modified Project would generate school-aged children and would create a need for school services. The Modified Project would help the City meet its RHNA obligation of 5,618 new housing units and as such, the Modified Project's population increase would fall within the net service population increase of 43,600 residents by 2040 considered in the impact analysis in the

Certified EIR and would not create a demand schools not already contemplated in the Certified EIR. Additionally, the Modified Project would be required to pay Developer Fees to offset the Modified Project's need for school services. Thus, the Modified Project would not result in substantial adverse physical impacts associated with the provision of new or physically altered school facilities, need for new or physically altered school facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, or other performance objectives for any of the school services. Therefore, the Modified Project would not result in new or increased significant impacts beyond those identified in the Certified EIR.

(d) Parks?

The Project Site is located in an urban area and is currently developed with Fab Cars and Trophy Automotive Dealer Group in five buildings (totaling approximately 104,000 square feet) and surface parking. Parks and recreational facilities in the Project Site area include Carson Park with baseball diamonds and a pool; reflections mini park; and Calas Park with public sports and fitness facilities. The Modified Project includes development of an infill site with 315 residential dwelling units, allowed under the existing zoning and land use designation for the site and in accordance with the State Density Bonus law. The Modified Project would generate a residential population, which would create a demand for parks and recreational facilities. The Modified Project would provide a total of 151,767 square feet of open space. Recreational amenities included as part of the Modified Project include a pool, spa, and pool building with restroom; lounge chairs and tables; and a structure with a grill and seating. The Modified Project would help the City meet its RHNA obligation of 5,618 new housing units and as such, the Modified Project's population increase would fall within the net service population increase of 43,600 residents by 2040 considered in the impact analysis in the Certified EIR and would not create a demand for parks and recreational facilities not already contemplated in the Certified EIR. Thus, the Modified Project would not result in substantial adverse physical impacts associated with the provision of new or physically altered park and recreational facilities, need for new or physically altered parks and recreational facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, or other performance objectives for any of the parks and recreational services. Therefore, the Modified Project would not result in new or increased significant impacts beyond those identified in the Certified EIR.

(e) Other Public Facilities?

The Project Site is located in an urban area and is currently developed with Fab Cars and Trophy Automotive Dealer Group in five buildings (totaling approximately 104,000 square feet) and surface parking. The Modified Project includes development of an infill site with 315 residential dwelling units, allowed under the existing zoning and land use designation for the site and in accordance with the State Density Bonus law. The Modified Project would generate a residential population, which would create a demand for administrative facilities and libraries. However, the Modified Project would help the City meet its RHNA

obligation of 5,618 new housing units and as such, the Modified Project's population increase would fall within the net service population increase of 43,600 residents by 2040 considered in the impact analysis in the Certified EIR and would not create a demand for other public facilities not already considered in the Certified EIR. Thus, the Modified Project would not result in substantial adverse physical impacts associated with the provision of new or physically altered public facilities, need for new or physically altered public facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, or other performance objectives for any public services. Therefore, the Modified Project would not result in new or increased significant impacts beyond those identified in the Certified EIR.

3.15.3 Any New Circumstances Involving New Significant Impact or Substantially More Severe Impacts?

No. As discussed above, the Modified Project would not result in any new or more severe significant impacts beyond what were identified in the Certified EIR.

3.15.4 Any New Information Requiring New Analysis or Verification?

No. There is no new information requiring new analysis or verification.

3.15.5 EIR's Mitigation Measures Addressing Impact

None required.

3.15.6 Conclusion

As discussed above, the Modified Project would not result in any of the conditions set forth in PRC Section 21166(c) or CEQA Guidelines Sections 15162 or 15163 that would require the preparation of a Supplemental or Subsequent EIR.

3.16 RECREATION

Issues (and supporting Information Sources)	Impact Determination in the Certified EIR	Do Proposed Changes Involve New Significant Impacts or Substantially More Severe Impacts?	Any New Circumstances Involving New Significant Impact or Substantially More Severe Impacts?	Any New Information Requiring New Analysis or Verification?	Certified EIR's Mitigation Measures Addressing Impacts
RECREATION					
(a) Would the project 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	No	No	No	No
(b) Does the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?	Less Than Significant	No	No	No	No

Impacts related to recreation are discussed in the Certified EIR on pages 3.14-1 through 3.14-18.

3.16.1 Impact Determination in the EIR

(a) Would the project 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 discussed in the Certified EIR, 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 General Plan Update 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 policies. Additionally, the City could add more than 180 acres of parkland to its inventory, which exceeds the 84.7 additional acres of parkland that the City would need to meet future demand. Therefore, the General Plan Update would maintain the City's existing parkland ratio of 1.9 acres per 1,000 residents.

The General Plan Update 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 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 General Plan Update 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 will help serve residents in the Planning Area, even if they are not counted toward public parkland.

The Certified EIR concluded that given that the General Plan Update 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 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.

(b) Does the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?

As discussed in the Certified EIR, the General Plan Update anticipates the development of new parks and greenways throughout Carson. In addition, the General Plan Update 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 General Plan Update 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, 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 land use designations and policies.

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 Certified EIR concluded that the impact associated with the construction or expansion of new recreation facilities would be less than significant with implementation of existing regulations and General Plan policies.

General Plan Policies

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.

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.

3.16.2 Do Proposed Changes Involve New Significant Impacts or Substantially More Severe Impacts?

(a) Would the project 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?

The Project Site is located in an urban area and is currently developed with Fab Cars and Trophy Automotive Dealer Group in five buildings (totaling approximately 104,000 square feet) and surface parking. Parks and recreational facilities in the Project Site area include Carson Park with baseball diamonds and a pool; reflections mini park; and Calas Park with public sports and fitness facilities. The Modified Project includes development of an infill site with 315 residential dwelling units, allowed under the existing zoning and land use designation for the site and in accordance with the State Density Bonus law. The Modified Project would generate a residential population, which would create a demand for parks and recreational facilities. The Modified Project would provide a total of 151,767 square feet of open space. Recreational amenities included as part of the Modified Project include a pool, spa, and pool building with restroom; lounge chairs and tables; and a structure with a grill and seating. The Modified Project would help the City meet its RHNA obligation of 5,618 new housing units and as such, the Modified Project's population increase would fall within the net service population increase of 43,600 residents by 2040 considered in the impact analysis in the Certified EIR and would not create a demand for parks and recreational facilities not already contemplated in the Certified EIR. Thus, the Modified Project would not increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated. Therefore, the Modified Project would not result in new or increased significant impacts beyond those identified in the Certified EIR.

(b) Does the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?

The Modified Project does not include the development of recreational facilities, per se. The recreational facilities that would be developed as part of the Project are inherent components of the Project and are not separate from the Project. The impacts associated with the developing the recreational facilities are captured within the impacts of the Project as a whole. The Project would not require the construction or expansion of recreational facilities. Therefore, the Modified Project would not result in new or increased significant impacts beyond those identified in the Certified EIR.

3.16.3 Any New Circumstances Involving New Significant Impact or Substantially More Severe Impacts?

No. As discussed above, the Modified Project would not result in any new or more severe significant impacts beyond what were identified in the Certified EIR.

3.16.4 Any New Information Requiring New Analysis or Verification?

No. There is no new information requiring new analysis or verification.

3.16.5 EIR's Mitigation Measures Addressing Impact

None required.

3.16.6 Conclusion

As discussed above, the Modified Project would not result in any of the conditions set forth in PRC Section 21166(c) or CEQA Guidelines Sections 15162 or 15163 that would require the preparation of a Supplemental or Subsequent EIR.

3.17 TRANSPORTATION

Issues (and supporting Information Sources)	Impact Determination in the Certified EIR	Do Proposed Changes Involve New Significant Impacts or Substantially More Severe Impacts?	Any New Circumstances Involving New Significant Impact or Substantially More Severe Impacts?	Any New Information Requiring New Analysis or Verification?	Certified EIR's Mitigation Measures Addressing Impacts
TRANSPORTATION / TRAFFIC: Would the project:					
(a) Conflict with a program, plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities?	Less Than Significant	No	No	No	No
(b) Conflict or be inconsistent with CEQA Guidelines Section 15064.3 subdivision (b)?	Significant and Unavoidable	No	No	No	No
(c) 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	No	No	No	No
(d) Result in inadequate emergency access?	Less Than Significant	No	No	No	No

Impacts related to transportation are discussed in the Certified EIR on pages 3.15-1 through 3.15-28.

3.17.1 Impact Determination in the EIR

(a) Would the Project conflict with a program, plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities?

As discussed in the Certified EIR, implementation of the 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.

The roadway network in Carson is considerably built out, such that no roadway capacity improvements (lane additions, lane widening, medians) are that would change the functional classification of the roadway network. The 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 General Plan Update would enable the City to improve bicycling programs and infrastructure throughout the City, providing connections to the existing and bicycle network. Implementation of 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 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. The Certified EIR concluded that based on the availability of nonvehicular transportation options for the community outlined above and the Circulation Goals and policies provided in the General Plan Update, the 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.

(b) Would the Project conflict or be inconsistent with CEQA Guidelines Section 15064.3 subdivision (b)?

VMT Analysis

Land use and corresponding socioeconomic data forecasts were developed for the General Plan Update, and the SCAG model was subsequently updated to reflect General Plan Update assumptions and run to develop VMT estimates for the buildout of General Plan Update. Under Existing/Baseline Conditions, 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.

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 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 General Plan Update would affect travel patterns relative to the currently adopted plan.

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.

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 is expanding its bicycle and pedestrian networks as proposed in the City's Master Plan of Bikeways and the existing General Plan. These bike improvements were examined 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, 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. 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.

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. 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. 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.” 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.

Since telecommuting trends are more pronounced for certain jobs, the potential VMT reductions were examined by considering 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 factor of 17 percent for the SCAG region. To provide a more conservative analysis, this factor was adjusted 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). The Certified EIR concluded that this impact would be significant.

(c) Would the Project substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?

As discussed in the Certified EIR, the 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 General Plan Update, these are evaluated at the program/citywide level.

The land use diagram and policies contained in the 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 General Plan Update would serve to reduce potential impacts from future development.

Access locations for development allowed under the 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 General Plan Update has been developed with an emphasis on multi-modal street networks, which would improve compatibility between different transportations modes and between the transportation system and adjacent land uses. Policies that promote bicycle and pedestrian safety would help identify and address potential safety concerns.

As a result, the Certified EIR concluded that the 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.

(d) Would the Project result in inadequate emergency access?

As discussed in the Certified EIR, the 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 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 General Plan Update would be consistent with these policies and not hinder emergency access for individual sites. The Certified EIR concluded that for these reasons, the General Plan Update would not result in inadequate emergency access, and this impact is considered less than significant.

General Plan Policies

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.

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.

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.

3.17.2 Do Proposed Changes Involve New Significant Impacts or Substantially More Severe Impacts?

(a) Would the Project conflict with a program, plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities?

The Project Site is located in an urban area and is currently developed with Fab Cars and Trophy Automotive Dealer Group in five buildings (totaling approximately 104,000 square feet) and surface parking. The Modified Project includes development of an infill site with 315 residential dwelling units, allowed under the existing zoning and land use designation for the site and in accordance with the State Density Bonus law.

The Certified EIR analysis reviewed programs, plans, ordinances, and policies addressing the circulation system, including transit, roadway, bicycle, and pedestrian facilities and found no conflicts. The Modified Project is consistent with City policies, programs, and ordinances such as increasing residential housing near corridors with transit, promoting active transportation, and directing commuter traffic to arterial streets and collectors, as appropriate. The Modified Project is consistent with City ordinances and would not preclude the implementation of a policy or projects identified in the City's Bike Plan. Thus, the Modified Project would not conflict with a program, plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities. Therefore, the Modified Project would not result in new or increased significant impacts beyond those identified in the Certified EIR.

(b) Would the Project conflict or be inconsistent with CEQA Guidelines Section 15064.3 subdivision (b)?

The Project Site is located in an urban area and is currently developed with Fab Cars and Trophy Automotive Dealer Group in five buildings (totaling approximately 104,000 square feet) and surface parking. The Modified Project includes development of an infill site with 315 residential dwelling units, allowed under the existing zoning and land use designation for the site and in accordance with the State Density Bonus law.

High- and low-VMT maps were prepared when the City's Transportation Study Guidelines were developed. The maps indicate that this site is located in a portion of the City where daily home-based VMT per capita is 13.1, which is 9 percent less than the City average of 14.4, indicating the Project Site is in a lower VMT area compared with the City's per

capita average VMT for residential land uses.[2] Thus, the Modified Project would not conflict or be inconsistent with CEQA Guidelines Section 15064.3 subdivision (b). Therefore, the Modified Project would not result in new or increased significant impacts beyond those identified in the Certified EIR.

(c) Would the Project substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?

The Project Site is located in an urban area and is currently developed with Fab Cars and Trophy Automotive Dealer Group in five buildings (totaling approximately 104,000 square feet) and surface parking. The Modified Project includes development of an infill site with 315 residential dwelling units, allowed under the existing zoning and land use designation for the site and in accordance with the State Density Bonus law. The Modified Project's residential uses would be substantially similar to other residential development nearby. The Modified Project does not include development outside of the established boundaries of the infill site, and the Modified Project does not include development of any new roadway infrastructure. Also, the Modified Project's vehicle access points would be constructed in accordance with applicable City design guidelines. Thus, the Modified Project would not substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment). Therefore, the Modified Project would not result in new or increased significant impacts beyond those identified in the Certified EIR.

(d) Would the Project result in inadequate emergency access?

The Project Site is located in an urban area and is currently developed with Fab Cars and Trophy Automotive Dealer Group in five buildings (totaling approximately 104,000 square feet) and surface parking. The Modified Project includes development of an infill site with 315 residential dwelling units, allowed under the existing zoning and land use designation for the site and in accordance with the State Density Bonus law. Consistent with the Certified EIR, as with all development in the City, the Modified Project would be required to comply with e City's design guidelines that incorporate safety and emergency access needs. The Modified Project would be required to undergo design review, which include a review of the Modified Project's plans for emergency access and the City ensuring that the Modified Project's emergency access meets all applicable standards. Thus, the Modified Project would not result in inadequate emergency access. Therefore, the Modified Project would not result in new or increased significant impacts beyond those identified in the Certified EIR.

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[2] *Carson Kott Site Residential Project CEQA Assessment, Fehr & Peers, September 4, 2024. Refer to Attachment E.*

3.17.3 Any New Circumstances Involving New Significant Impact or Substantially More Severe Impacts?

No. As discussed above, the Modified Project would not result in any new or more severe significant impacts beyond what were identified in the Certified EIR.

3.17.4 Any New Information Requiring New Analysis or Verification?

No. There is no new information requiring new analysis or verification.

3.17.5 EIR's Mitigation Measures Addressing Impact

None required.

3.17.6 Conclusion

As discussed above, the Modified Project would not result in any of the conditions set forth in PRC Section 21166(c) or CEQA Guidelines Sections 15162 or 15163 that would require the preparation of a Supplemental or Subsequent EIR.

3.18 TRIBAL CULTURAL RESOURCES

Issues (and supporting Information Sources)	Impact Determination in the Certified EIR	Do Proposed Changes Involve New Significant Impacts or Substantially More Severe Impacts?	Any New Circumstances Involving New Significant Impact or Substantially More Severe Impacts?	Any New Information Requiring New Analysis or Verification?	Certified EIR's Mitigation Measures Addressing Impacts
TRIBAL CULTURAL RESOURCES: Would the project:					
(a) Would the project cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code section 21074 as either a site, feature, please, 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)?	Less Than Significant	No	No	No	No
(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 Resources Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe?	Less Than Significant	No	No	No	No

Impacts related to tribal cultural resources are discussed in the Certified EIR on pages 3.16-1 through 3.16-18.

3.18.1 Impact Determination in the EIR

(a) Would the project cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code section 21074 as either a site, feature, please, 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 Resources Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe?***

Questions (a.i) and (a.ii) were addressed together in the Certified EIR.

As discussed in the Certified EIR, future development proposals initiated under the 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 Native American individuals and organizations on March 29, 2021, pursuant to AB 52 and to seven 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. The Certified EIR concluded that additionally, the 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 General Plan policies would ensure that the General Plan Update's impact with respect to tribal cultural resources would be less than significant.

General Plan Policies

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.

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.

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.

3.18.2 Do Proposed Changes Involve New Significant Impacts or Substantially More Severe Impacts?

(a) Would the project cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code section 21074 as either

a site, feature, please, 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, the lead agency shall consider the significance of the resource to a California Native American tribe.***

The Project Site is located in an urban area and is currently developed with Fab Cars and Trophy Automotive Dealer Group in five buildings (totaling approximately 104,000 square feet) and surface parking. The Modified Project includes development of an infill site with 315 residential dwelling units, allowed under the existing zoning and land use designation for the site and in accordance with the State Density Bonus law. No known tribal cultural resources exist at the Project Site. However, given that tribal cultural resources are known to exist throughout the Project Site area, it is possible that unknown resources could be uncovered during the Modified Project's construction phase. However, as required by Mitigation Measure CUL-2 identified in the Certified EIR and applicable to the Modified Project, the Modified Project would be required to prepare 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. Assessments shall 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. The City would incorporate the study recommendations as Modified Project conditions of approval to ensure that impacts on archaeological and/or tribal cultural resources are mitigated to the maximum extent possible. Thus, the Modified Project would not 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, please, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is listed or eligible for listing in the California Register of Historical Resources, or in the local register of historical resources as defined in Public Resources Code Section 5020.1(k) or a resource determined by the lead agency in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision. Therefore, the Modified Project would not result in new or increased significant impacts beyond those identified in the Certified EIR.

3.18.3 Any New Circumstances Involving New Significant Impact or Substantially More Severe Impacts?

No. As discussed above, the Modified Project would not result in any new or more severe significant impacts beyond what were identified in the Certified EIR.

3.18.4 Any New Information Requiring New Analysis or Verification?

No. There is no new information requiring new analysis or verification.

3.18.5 EIR's Mitigation Measures Addressing Impact

None required.

3.18.6 Conclusion

As discussed above, the Modified Project would not result in any of the conditions set forth in PRC Section 21166(c) or CEQA Guidelines Sections 15162 or 15163 that would require the preparation of a Supplemental or Subsequent EIR.

3.19 UTILITIES AND SERVICE SYSTEMS

Issues (and supporting Information Sources)	Impact Determination in the Certified EIR	Do Proposed Changes Involve New Significant Impacts or Substantially More Severe Impacts?	Any New Circumstances Involving New Significant Impact or Substantially More Severe Impacts?	Any New Information Requiring New Analysis or Verification?	Certified EIR's Mitigation Measures Addressing Impacts
UTILITIES AND SERVICE SYSTEMS: Would the project:					
(a) Require or result in the relocation or construction of new or expanded water, wastewater treatment or storm water drainage, electric power, natural gas, or telecommunications facilities or expansion of existing facilities, the construction of which could cause significant environment effects?	Less Than Significant	No	No	No	No
(b) Have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry, and multiple dry years?	Less Than Significant	No	No	No	No
(c) 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?	Less Than Significant	No	No	No	No
(d) 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	No	No	No	No
(e) Comply with federal, state and local management and reduction statutes and regulations related to solid waste?	Less Than Significant	No	No	No	No

Impacts related to utilities and service systems are discussed in the Certified EIR on pages 3.17-1 through 3.17-30.

3.19.1 Impact Determination in the EIR

(a) Would the Project require or result in the relocation or construction of new or expanded water, wastewater treatment or storm water drainage, electric power,

natural gas, or telecommunications facilities or expansion of existing facilities, the construction of which could cause significant environment effects?

Construction of Water Treatment Facilities

As discussed in the Certified EIR, the Metropolitan Water District (MWD) treats the surface water provided to the West Basin Municipal Water District (WBMWD) and Central Basin Municipal Water District (CBMWD) at the F.E. Weymouth treatment plant located in La Verne. The facility has a capacity of 520 million gallons per day (MGD) and is currently treating an average of 224 MGD. Growth anticipated under the 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 General Plan Update. Additionally, policies in the 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. The Certified EIR concluded that for these reasons, growth under the General Plan Update would not 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

As discussed in the Certified EIR, wastewater generated in the City is treated at the Joint Water Pollution Control Plant, which is located in Carson and operated by the LACSD. 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 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, the Certified EIR concluded that growth under the General Plan would not 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 discussed in the Certified EIR, the Los Angeles County Flood Control District (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.

Storm water runoff may mobilize pollutants (e.g., trash, oil, etc.) 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 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 the Certified 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, the Certified EIR concluded that storm water generated by development allowed under the 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

As discussed in the Certified EIR, 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 General Plan policies that promote renewable energy generation and energy efficiency would ensure that new development associated with the implementation of the 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 the Certified 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, the Certified EIR concluded that 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

As discussed in the Certified EIR, 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 one percent from 2020–2035 due to modest economic growth and CPUC-mandated energy efficiency standards and projects. Additionally, all new development would be subject to energy efficiency standards contained in the 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 the Certified 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, the Certified EIR concluded that 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

As discussed in the Certified EIR, 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 the Certified 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.

(b) Would the Project have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry, and multiple dry years?

As discussed in the Certified EIR, the City is served by two water service providers, Cal Water and Golden State Water (GSW). Cal Water Dominguez District serves most of the City 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).

GSW serves the northwest corner of the City and also provides its customers with a combination of local groundwater and surface water purchased from the MWD. As presented in GSW's 2020 Urban Water Management Plan (UWMP), 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 acre-feet (AF) per year (23,414,849 gallons per day), the GSW service area is currently using 84 gallons of water per GPCD.

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 implementation of the 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 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 General Plan Update from existing entitlements and resources, growth under the 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 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 water supply assessment (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.

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 H_2O Challenge educational program.

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 General Plan Update would establish water conservation features. Equally important, implementation of policies in the 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. 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.

The Certified EIR concluded that for these reasons, sufficient water supply would be available to serve future development allowed under the General Plan Update during normal, dry, and multiple dry years. Therefore, the impact with respect to water supply would be less than significant.

(c) Would the Project 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?

As discussed in the Certified EIR, growth anticipated under the 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 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 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 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.

The Certified EIR concluded that for the reasons stated above, adequate wastewater treatment capacity would exist to treat growth anticipated under the General Plan Update in addition to LACSD's existing commitments. Therefore, the impact with respect to wastewater treatment capacity would be less than significant.

(d) Would the Project generate solid waste in excess of State or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals?

As discussed in the Certified EIR, 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 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 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 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 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 General Plan policies that promote recycling would further address potential impacts.

The Certified EIR concluded that for the reasons stated above, growth anticipated under the 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.

(e) Would the Project comply with federal, state and local management and reduction statutes and regulations related to solid waste?

As discussed in the Certified EIR, 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 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 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 General Plan Update would comply with federal, state, and local management and reduction statutes and regulations related to solid waste. Therefore, the Certified EIR concluded the impact with respect to solid waste regulations would be less than significant.

General Plan Policies

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.

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.

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.

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.

3.19.2 Do Proposed Changes Involve New Significant Impacts or Substantially More Severe Impacts?

(a) Would the Project require or result in the relocation or construction of new or expanded water, wastewater treatment or storm water drainage, electric power, natural gas, or telecommunications facilities or expansion of existing facilities, the construction of which could cause significant environment effects?

Construction of Water Treatment Facilities

The Project Site is located in an urban area and is currently developed with Fab Cars and Trophy Automotive Dealer Group in five buildings (totaling approximately 104,000 square

feet) and surface parking. The Modified Project includes development of an infill site with 315 residential dwelling units, allowed under the existing zoning and land use designation for the site and in accordance with the State Density Bonus law. The Modified Project would increase the demand for water treatment.

The Modified Project would help the City meet its RHNA obligation of 5,618 new housing units and as such, the Modified Project's population increase would fall within the net service population increase of 43,600 residents by 2040 considered in the impact analysis in the Certified EIR and would not create a demand for water treatment not already contemplated in the Certified EIR. Additionally, the Certified EIR concluded that 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 General Plan Update. Further, the Modified Project would be required to implement policies in the General Plan update that aim to conserve water through public education programs and the promotion of water conserving devices and practices in new construction. 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. Thus, the Modified Project would not require or result in the relocation or construction of new or expanded water treatment facilities, the construction of which could cause significant environment effects. Therefore, the Modified Project would not result in new or increased significant impacts beyond those identified in the Certified EIR.

Construction of Wastewater Treatment Facilities

The Project Site is located in an urban area and is currently developed with Fab Cars and Trophy Automotive Dealer Group in five buildings (totaling approximately 104,000 square feet) and surface parking. The Modified Project includes development of an infill site with 315 residential dwelling units, allowed under the existing zoning and land use designation for the site and in accordance with the State Density Bonus law. The Modified Project would increase the demand for wastewater treatment.

The Modified Project would help the City meet its RHNA obligation of 5,618 new housing units and as such, the Modified Project's population increase would fall within the net service population increase of 43,600 residents by 2040 considered in the impact analysis in the Certified EIR and would not create a demand for wastewater treatment not already contemplated in the Certified EIR. Additionally, the Certified EIR concluded that Joint Water Pollution Control Plant has sufficient remaining capacity to treat the full increase in sewage attributable to growth anticipated under the General Plan. Additionally, the Modified Project would be required to implement the policies in the 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, and in turn, the generation of wastewater. Thus, the Modified Project would not require or result in the relocation or construction of new or expanded wastewater treatment facilities, the construction of which could cause significant environment effects. Therefore, the Modified

Project would not result in new or increased significant impacts beyond those identified in the Certified EIR.

Construction of Storm Drainage Facilities

As discussed in response to question 3.10(c.iii) (Hydrology and Water Quality – Storm Drain Capacity), in its existing condition, the Project Site is completely impervious. During storm events, water flows across the site to the local storm drain and does not encounter bare soil. This condition would not change substantially under the Modified Project, and the Modified Project would not require additional storm drain capacity. Thus, the Modified Project would not require or result in the relocation or construction of new or expanded storm drain facilities, the construction of which could cause significant environment effects. Therefore, the Modified Project would not result in new or increased significant impacts beyond those identified in the Certified EIR.

Construction of Electrical Facilities

The Project Site is located in an urban area and is currently developed with Fab Cars and Trophy Automotive Dealer Group in five buildings (totaling approximately 104,000 square feet) and surface parking. The Modified Project includes development of an infill site with 315 residential dwelling units, allowed under the existing zoning and land use designation for the site and in accordance with the State Density Bonus law. The Modified Project would increase the demand on electricity facilities.

The Modified Project would help the City meet its RHNA obligation of 5,618 new housing units and as such, the Modified Project's population increase would fall within the net service population increase of 43,600 residents by 2040 considered in the impact analysis in the Certified EIR and would not create a demand for electricity facilities not already contemplated in the Certified EIR.

The Certified EIR concluded that new development would be subject to the CALGreen code, which establishes mandatory energy efficiency measures for new residential buildings. Compliance with current CALGreen requirements and General Plan policies that promote renewable energy generation and energy efficiency would ensure that new development associated with the implementation of the General Plan Update would be energy efficient, thus reducing the need for new electrical power infrastructure. Thus, the Modified Project would not require or result in the relocation or construction of new or expanded electricity facilities, the construction of which could cause significant environment effects. Therefore, the Modified Project would not result in new or increased significant impacts beyond those identified in the Certified EIR.

Construction of Natural Gas Facilities

The Project Site is located in an urban area and is currently developed with Fab Cars and Trophy Automotive Dealer Group in five buildings (totaling approximately 104,000 square feet) and surface parking. The Modified Project includes development of an infill site with 315 residential dwelling units, allowed under the existing zoning and land use designation

for the site and in accordance with the State Density Bonus law. The Modified Project would increase the demand on natural gas facilities.

The Modified Project would help the City meet its RHNA obligation of 5,618 new housing units and as such, the Modified Project's population increase would fall within the net service population increase of 43,600 residents by 2040 considered in the impact analysis in the Certified EIR and would not create a demand for natural gas facilities not already contemplated in the Certified EIR.

The Certified EIR concluded that SoCalGas projects that total gas demand in its service area would decline at an annual rate of one percent from 2020–2035 due to modest economic growth and CPUC-mandated energy efficiency standards and projects. Additionally, all new development (including the Modified Project) would be subject to energy efficiency standards contained in the CALGreen code, thus reducing the need for new natural gas infrastructure. Thus, the Modified Project would not require or result in the relocation or construction of new or expanded natural gas facilities, the construction of which could cause significant environment effects. Therefore, the Modified Project would not result in new or increased significant impacts beyond those identified in the Certified EIR.

Construction of Telecommunications Facilities

The Project Site is located in an urban area and is currently developed with Fab Cars and Trophy Automotive Dealer Group in five buildings (totaling approximately 104,000 square feet) and surface parking. The Modified Project includes development of an infill site with 315 residential dwelling units, allowed under the existing zoning and land use designation for the site and in accordance with the State Density Bonus law. The Modified Project would increase the demand on telecommunications facilities.

The Modified Project would help the City meet its RHNA obligation of 5,618 new housing units and as such, the Modified Project's population increase would fall within the net service population increase of 43,600 residents by 2040 considered in the impact analysis in the Certified EIR and would not create a demand for telecommunications facilities not already contemplated in the Certified EIR.

The Certified EIR concluded that 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 the Certified 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. Thus, the Modified Project would not require or result in the relocation or construction of new or expanded telecommunications facilities, the construction of which could cause significant environment effects. Therefore, the Modified

Project would not result in new or increased significant impacts beyond those identified in the Certified EIR.

(b) Would the Project have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry, and multiple dry years?

The Project Site is located in an urban area and is currently developed with Fab Cars and Trophy Automotive Dealer Group in five buildings (totaling approximately 104,000 square feet) and surface parking. The Modified Project includes development of an infill site with 315 residential dwelling units, allowed under the existing zoning and land use designation for the site and in accordance with the State Density Bonus law. The Modified Project would increase the demand for water supply.

The Modified Project would help the City meet its RHNA obligation of 5,618 new housing units and as such, the Modified Project's population increase would fall within the net service population increase of 43,600 residents by 2040 considered in the impact analysis in the Certified EIR and would not create a demand for water supply not already contemplated in the Certified EIR.

The Certified EIR stated that it is expected that there will be sufficient water supplies available to serve the development associated with the General Plan Update from existing entitlements and resources, and Cal Water and GSW will be required to account for General Plan growth during the next UWMP update cycle in 2025. Furthermore, as with all new development in the City, the Modified Project would also be subject to water conservation standards contained in the CALGreen code and policies in the proposed General Plan that will reduce the overall existing and future water usage in the City. 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. Thus, the Modified Project would not have insufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry, and multiple dry years. Therefore, the Modified Project would not result in new or increased significant impacts beyond those identified in the Certified EIR.

(c) Would the Project 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?

The Project Site is located in an urban area and is currently developed with Fab Cars and Trophy Automotive Dealer Group in five buildings (totaling approximately 104,000 square feet) and surface parking. The Modified Project includes development of an infill site with 315 residential dwelling units, allowed under the existing zoning and land use designation for the site and in accordance with the State Density Bonus law. The Modified Project would increase the demand for wastewater treatment.

The Modified Project would help the City meet its RHNA obligation of 5,618 new housing units and as such, the Modified Project's population increase would fall within the net service population increase of 43,600 residents by 2040 considered in the impact analysis in the Certified EIR and would not create a demand for wastewater treatment not already contemplated in the Certified EIR. Additionally, the Certified EIR concluded that Joint Water Pollution Control Plant has sufficient remaining capacity to treat the full increase in sewage attributable to growth anticipated under the General Plan. Additionally, the Modified Project would be required to implement the policies in the 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, and in turn, the generation of wastewater. Thus, the Modified Project would not require or result in the relocation or construction of new or expanded wastewater treatment facilities, the construction of which could cause significant environment effects. Therefore, the Modified Project would not result in new or increased significant impacts beyond those identified in the Certified EIR.

(d) Would the Project generate solid waste in excess of State or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals?

The Project Site is located in an urban area and is currently developed with Fab Cars and Trophy Automotive Dealer Group in five buildings (totaling approximately 104,000 square feet) and surface parking. The Modified Project includes development of an infill site with 315 residential dwelling units, allowed under the existing zoning and land use designation for the site and in accordance with the State Density Bonus law. The Modified Project would increase the demand for landfill capacity.

The Modified Project would help the City meet its RHNA obligation of 5,618 new housing units and as such, the Modified Project's population increase would fall within the net service population increase of 43,600 residents by 2040 considered in the impact analysis in the Certified EIR and would not create a demand for landfill capacity not already contemplated in the Certified EIR.

The Certified EIR stated that 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 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 General Plan policies that promote recycling would further reduce the Modified Project's solid waste generation. Thus, the Modified 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. Therefore, the Modified Project would not result in new or increased significant impacts beyond those identified in the Certified EIR.

(e) Would the Project comply with federal, state and local management and reduction statutes and regulations related to solid waste?

The Modified Project would be required to comply with the City's recycling requirements. Therefore, the Modified Project would not result in new or increased significant impacts beyond those identified in the Certified EIR.

3.19.3 Any New Circumstances Involving New Significant Impact or Substantially More Severe Impacts?

No. As discussed above, the Modified Project would not result in any new or more severe significant impacts beyond what were identified in the Certified EIR.

3.19.4 Any New Information Requiring New Analysis or Verification?

No. There is no new information requiring new analysis or verification.

3.19.5 EIR's Mitigation Measures Addressing Impact

None required.

3.19.6 Conclusion

As discussed above, the Modified Project would not result in any of the conditions set forth in PRC Section 21166(c) or CEQA Guidelines Sections 15162 or 15163 that would require the preparation of a Supplemental or Subsequent EIR.

3.20 WILDFIRE

Issues (and supporting Information Sources)	Impact Determination in EIR	Any Substantial Changes Involving New Significant Impacts or Substantially More Severe Impacts?	Any Substantially Changed Circumstances Involving New Significant Impact or Substantially More Severe Impacts?	Any New Information of Substantial Importance?	EIR's Mitigation Measures Addressing Impact
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?	No Impact	No	No	No	No
(b) Due to slope, prevailing winds, and other factors, exacerbate wildfire risks, and thereby expose project occupants to, pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire?	No Impact	No	No	No	No
(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?	No Impact	No	No	No	No
(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 change?	No Impact	No	No	No	No

Impacts related to wildfire are discussed in the Certified EIR on pages 5-3 and 5-4.

3.20.1 Impact Determination in the EIR

(a) Would the Project substantially impair an adopted emergency response plan or emergency evacuation plan?

(b) Due to slope, prevailing winds, and other factors, exacerbate wildfire risks, would the Project thereby expose project occupants to, pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire?

(c) Would the Project require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines

or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment?

(d) Would the Project 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 change?

Questions (a) through (d) were addressed together in the Certified EIR.

As discussed in the Certified EIR, 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-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. The Certified EIR concluded that no impacts would occur.

General Plan Policies

None.

Mitigation Measures

None.

3.20.2 Do Proposed Changes Involve New Significant Impacts or Substantially More Severe Impacts?

(a) Would the Project substantially impair an adopted emergency response plan or emergency evacuation plan?

(b) Due to slope, prevailing winds, and other factors, exacerbate wildfire risks, would the Project thereby expose project occupants to, pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire?

(c) Would the Project require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment?

(d) Would the Project 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 change?

As with the Certified EIR, questions (a) through (d) were addressed together in the Certified EIR.

The Project Site is not in or near a state responsibility area or lands classified as very high fire hazard severity zone. Therefore, the impact with respect to wildfire hazards would be less than significant.

3.20.3 Any New Circumstances Involving New Significant Impact or Substantially More Severe Impacts?

No. As discussed above, the Modified Project would not result in any new or more severe significant impacts beyond what were identified in the Certified EIR.

3.20.4 Any New Information Requiring New Analysis or Verification?

No. There is no new information requiring new analysis or verification.

3.20.5 EIR's Mitigation Measures Addressing Impact

None required.

3.20.6 Conclusion

As discussed above, the Modified Project would not result in any of the conditions set forth in PRC Section 21166(c) or CEQA Guidelines Sections 15162 or 15163 that would require the preparation of a Supplemental or Subsequent EIR.

4 ADDENDUM CONCLUSION

As demonstrated by the discussion above, impacts associated with the Modified Project would be similar to or less than the impacts addressed in the Certified EIR. No substantial changes would occur with respect to the circumstances under which the Modified Project is undertaken that will require major revisions of the Certified EIR due to the involvement of new significant environmental effects or a substantial increase in the severity of previously identified significant effects. In addition, no new information of substantial importance has become available relative to any of the environmental topic categories that would result in in new or more severe significant environmental impacts. In addition, the applicable mitigation measures included as part of the Certified EIR would continue to be implemented under the Modified Project. As all of the impacts of the Modified Project would be within the envelope of impacts analyzed in the Certified EIR, none of the conditions described in PRC Section 21166 and CEQA Guidelines Sections 15162 and 15163 requiring a Supplemental or Subsequent EIR would occur. Additionally, there are no known mitigation measures or project alternatives that were previously considered infeasible but are now considered feasible that would substantially reduce one or more significant effects on the environment identified in the Certified EIR. Therefore, the Modified Project would not create any potential adverse impacts beyond those evaluated in the Certified EIR. As such, the preparation of an addendum is appropriate and fully complies with the requirements of PRC Section 21166 and CEQA Guidelines Sections 15162, 15163, and 15164.

ATTACHMENTS

A. Air Quality Report
B. GHG Emissions Report
C. Noise Report
D. Vibration Report
E. Traffic Memo

ATTACHMENT A
AIR QUALITY REPORT

AIR QUALITY TECHNICAL REPORT

Introduction

This technical report addresses the air quality impacts generated by construction and operation of the Proposed Carson Triangle Project at 21212 Avalon Boulevard in the City of Carson. The analysis evaluates the consistency of the Project with air quality policies set forth in the South Coast Air Quality Management District's (SCAQMD) Air Quality Management Plan (AQMP) and the City's General Plan. The analysis of Project-generated air emissions focuses on whether the Project would cause an exceedance of an ambient air quality standard or SCAQMD significance threshold. Calculation worksheets, assumptions, and model outputs used in the analysis are included in the Technical Appendix to this analysis.

Regulatory Framework

Federal

The Federal Clean Air Act (CAA) was first enacted in 1955 and has been amended numerous times in subsequent years, with the most recent amendments in 1990. At the federal level, the United States Environmental Protection Agency (USEPA) is responsible for implementation of some portions of the CAA (e.g., certain mobile source and other requirements). Other portions of the CAA (e.g., stationary source requirements) are implemented by state and local agencies. In California, the California Clean Air Act (CCAA) is administered by the California Air Resources Board (CARB) at the State level and by the air quality management districts and air pollution control districts at the regional and local levels.

The 1990 amendments to the CAA identify specific emission reduction goals for areas not meeting the National Ambient Air Quality Standard (NAAQS). These amendments require both a demonstration of reasonable further progress toward attainment and incorporation of additional sanctions for failure to attain or to meet interim milestones. The sections of the CAA which are most applicable to the Project include Title I (Nonattainment Provisions) and Title II (Mobile Source Provisions).

NAAQS have been established for seven major air pollutants: CO (carbon monoxide), NO_2 (nitrogen dioxide), O_3 (ozone), $PM_{2.5}$ (particulate matter, 2.5 microns), PM_{10} (particulate matter, 10 microns), SO_2 (sulfur dioxide), and Pb (lead).

The CAA requires the USEPA to designate areas as attainment, nonattainment, or maintenance (previously nonattainment and currently attainment) for each criteria pollutant based on whether the NAAQS have been achieved. Title I provisions are implemented for the purpose of attaining NAAQS. The federal standards are summarized in Table 1. The USEPA has classified the Los Angeles County portion of the South Coast Air Basin (Basin) as a nonattainment area for O_3, $PM_{2.5}$, and Pb.

Table 1
State and National Ambient Air Quality Standards and Attainment Status for LA County

Pollutant	Averaging Period	California		Federal	
		Standards	Attainment Status	Standards	Attainment Status
Ozone (O_3)	1-hour	0.09 ppm (180 µg/m^3)	Non-attainment	--	--
	8-hour	0.070 ppm (137 µg/m^3)	N/A[1]	0.070 ppm (137 µg/m^3)	Non-attainment
Respirable Particulate Matter (PM_{10})	24-hour	50 µg/m^3	Non-attainment	150 µg/m^3	Maintenance
	Annual Arithmetic Mean	20 µg/m^3	Non-attainment	--	--
Fine Particulate Matter ($PM_{2.5}$)	24-hour	--	--	35 µg/m^3	Non-attainment
	Annual Arithmetic Mean	12 µg/m^3	Non-attainment	12 µg/m^3	Non-attainment
Carbon Monoxide (CO)	1-hour	20 ppm (23 mg/m^3)	Attainment	35 ppm (40 mg/m^3)	Maintenance
	8-hour	9.0 ppm (10 mg/m^3)	Attainment	9 ppm (10 mg/m^3)	Maintenance
Nitrogen Dioxide (NO_2)	1-hour	0.18 ppm (338 µg/m^3)	Attainment	100 ppb (188 µg/m^3)	Maintenance
	Annual Arithmetic Mean	0.030 ppm (57 µg/m^3)	Attainment	53 ppb (100 µg/m^3)	Maintenance
Sulfur Dioxide (SO_2)	1-hour	0.25 ppm (655 µg/m^3)	Attainment	75 ppb (196 µg/m^3)	Attainment
	24-hour	0.04 ppm (105 µg/m^3)	Attainment	--	--
Lead (Pb)	30-day average	1.5 µg/m^3	Attainment	--	--
	Calendar Quarter	--	--	0.15 µg/m^3	Non-attainment
Visibility Reducing Particles	8-hour	Extinction of 0.07 per kilometer	N/A	No Federal Standards	
Sulfates	24-hour	25 µg/m^3	Attainment	No Federal Standards	
Hydrogen Sulfide (H_2S)	1-hour	0.03 ppm (42 µg/m^3)	Unclassified	No Federal Standards	
Vinyl Chloride	24-hour	0.01 ppm (26 µg/m^3)	N/A	No Federal Standards	

N/A = not available
ppm = parts per million; µg/m^3 – micrograms per cubic meter; mg/m^3 – milligrams per cubic meter
Source: USEPA, NAAQS Table (https://www.epa.gov/criteria-air-pollutants/naaqs-table) and CARB, California Ambient Air Quality Standards (https://ww2.arb.ca.gov/resources/california-ambient-air-quality-standards). Attainment status data from CARB, Ambient Air Quality Standards, and attainment status (www.arb.ca.gov/desig/adm/adm.htm).

CAA Title II pertains to mobile sources, such as cars, trucks, buses, and planes. Reformulated gasoline and automobile pollution control devices are examples of the mechanisms the USEPA uses to regulate mobile air emission sources. The provisions of Title II have resulted in tailpipe emission standards for vehicles, which have been strengthened in recent years to improve air quality. For example, the standards for NO_X emissions have been lowered substantially and the specification requirements for cleaner burning gasoline are more stringent.

The USEPA regulates emission sources that are under the exclusive authority of the federal government, such as aircraft, ships, and certain types of locomotives. USEPA has jurisdiction over emission sources outside state waters (e.g., beyond the outer continental shelf) and establishes various emission standards, including those for vehicles sold in states other than California. Automobiles sold in California must meet stricter emission standards established by CARB. USEPA adopted multiple tiers of emission standards to reduce emissions from non-road diesel engines (e.g., diesel-powered construction equipment) by integrating engine and fuel controls as a system to gain the greatest emission reductions. The first federal standards (Tier 1) for new non-road (or off-road) diesel engines were adopted in 1994 for engines over 50 horsepower, to be phased-in from 1996 to 2000. On August 27, 1998, USEPA introduced Tier 1 standards for equipment under 37 kW (50 horsepower) and increasingly more stringent Tier 2 and Tier 3 standards for all equipment with phase-in schedules from 2000 to 2008. The Tier 1 through 3 standards were met through advanced engine design, with no or only limited use of exhaust gas after-treatment (oxidation catalysts). Tier 3 standards for NO_X and hydrocarbon are similar in stringency to the 2004 standards for highway engines. However, Tier 3 standards for particulate matter were never adopted. On May 11, 2004, USEPA signed the final rule introducing Tier 4 emission standards, which were phased-in between 2008 and 2015. The Tier 4 standards require that emissions of particulate matter and NO_X be further reduced by about 90 percent. Such emission reductions are achieved through the use of control technologies—including advanced exhaust gas after-treatment.

State

California Clean Air Act. In addition to being subject to the requirements of CAA, air quality in California is also governed by more stringent regulations under the CCAA. In California, CCAA is administered by CARB at the state level and by the air quality management districts and air pollution control districts at the regional and local levels. CARB, which became part of the California Environmental Protection Agency in 1991, is responsible for meeting the state requirements of the CAA, administering the CCAA, and establishing the California Ambient Air Quality Standards (CAAQS). The CCAA, as amended in 1992, requires all air districts in the State to endeavor to achieve and maintain the CAAQS. CAAQS are generally more stringent than the corresponding federal standards and incorporate additional standards for sulfates, hydrogen sulfide, vinyl chloride, and visibility-reducing particles.

CARB regulates mobile air pollution sources, such as motor vehicles. CARB is responsible for setting emission standards for vehicles sold in California and for other emission sources, such as consumer products and certain off-road equipment. CARB established passenger vehicle fuel specifications in March 1996. CARB oversees the functions of local air pollution control districts and air quality management districts, which, in turn, administer air quality activities at the regional and county levels. The State standards are summarized in Table 1.

The CCAA requires CARB to designate areas within California as either attainment or nonattainment for each criteria pollutant based on whether the CAAQS thresholds have been achieved. Under the CCAA, areas are designated as nonattainment for a pollutant if air quality data shows that a state standard for

the pollutant was violated at least once during the previous three calendar years. Exceedances that are affected by highly irregular or infrequent events are not considered violations of a state standard and are not used as a basis for designating areas as nonattainment. Under the CCAA, the non-desert Los Angeles County portion of the Basin is designated as a nonattainment area for O_3, PM_{10}, and $PM_{2.5}$.

In August 2022, CARB approved regulations to ban new gasoline-powered cars beginning with 2035 models. Automakers will gradually electrify their fleet of new vehicles, beginning with 35 percent of 2026 models sold. In March 2023, USEPA approved CARB's regulations that mandate that all new medium- and heavy-duty trucks would be zero emissions by 2045 where feasible. Trucking companies would also have to gradually convert their existing fleets to zero emission vehicles.

CARB has further required that all small (25 horsepower and below) off-road engines that are spark-ignited (e.g., lawn and gardening equipment) must be zero emission starting in model year 2024. Standards for portable generators and large pressure washers were given until model year 2028 to be electric-powered.

Toxic Air Contaminant Identification and Control Act. The public's exposure to toxic air contaminants (TACs) is a significant public health issue in California. CARB's statewide comprehensive air toxics program was established in the early 1980s. The Toxic Air Contaminant Identification and Control Act created California's program to reduce exposure to air toxics. Under the Toxic Air Contaminant Identification and Control Act, CARB is required to use certain criteria in the prioritization for the identification and control of air toxics. In selecting substances for review, CARB must consider criteria relating to "the risk of harm to public health, amount or potential amount of emissions, manner of, and exposure to, usage of the substance in California, persistence in the atmosphere, and ambient concentrations in the community" [Health and Safety Code Section 39666(f)].

The Toxic Air Contaminant Identification and Control Act also requires CARB to use available information gathered from the Air Toxics "Hot Spots" Information and Assessment Act program to include in the prioritization of compounds. CARB identified particulate emissions from diesel-fueled engines (diesel PM) TACs in August 1998. Following the identification process, CARB was required by law to determine if there is a need for further control, which led to the risk management phase of the program. For the risk management phase, CARB formed the Diesel Advisory Committee to assist in the development of a risk management guidance document and a risk reduction plan. With the assistance of the Diesel Advisory Committee and its subcommittees, CARB developed the Risk Reduction Plan to Reduce Particulate Matter Emissions from Diesel-Fueled Engines and Vehicles and the Risk Management Guidance for the Permitting of New Stationary Diesel-Fueled Engines. CARB approved these documents on September 28, 2000, paving the way for the next step in the regulatory process: the control measure phase. During the control measure phase, specific Statewide regulations designed to further reduce diesel PM emissions from diesel-fueled engines and vehicles have and continue to be evaluated and developed. The goal of each regulation is to make diesel engines as clean as possible by establishing state-of-the-art technology requirements or emission standards to reduce diesel PM emissions. Breathing H_2S at levels above the State standard could result in exposure to a disagreeable rotten eggs odor. The State does not regulate other odors.

California Air Toxics Program. The California Air Toxics Program was established in 1983, when the California Legislature adopted Assembly Bill (AB) 1807 to establish a two-step process of risk identification and risk management to address potential health effects from exposure to toxic substances

in the air.[1] In the risk identification step, CARB and the Office of Environmental Health Hazard Assessment (OEHHA) determine if a substance should be formally identified, or "listed," as a TAC in California. Since inception of the program, a number of such substances have been listed, including benzene, chloroform, formaldehyde, and particulate emissions from diesel-fueled engines, among others.[2] In 1993, the California Legislature amended the program to identify the 189 federal hazardous air pollutants as TACs.

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

In addition to limiting exhaust from idling trucks, CARB adopted regulations on July 26, 2007 for off-road diesel construction equipment such as bulldozers, loaders, backhoes, and forklifts, as well as many other self-propelled off-road diesel vehicles to reduce emissions by installation of diesel particulate filters and encouraging the replacement of older, dirtier engines with newer emission-controlled models. In April 2021, CARB proposed a 2020 Mobile Source Strategy that seeks to move California to 100 percent zero-emission off-road equipment by 2035.

Assembly Bill 2588 Air Toxics "Hot Spots" Program. The AB 1807 program is supplemented by the AB 2588 Air Toxics "Hot Spots" program, which was established by the California Legislature in 1987. Under this program, facilities are required to report their air toxics emissions, assess health risks, and notify nearby residents and workers of significant risks if present. In 1992, the AB 2588 program was amended by Senate Bill (SB) 1731 to require facilities that pose a significant health risk to the community to reduce their risk through implementation of a risk management plan.

Air Quality and Land Use Handbook: A Community Health Perspective. The *Air Quality and Land Use Handbook: A Community Health Perspective* provides important air quality information about certain types of facilities (e.g., freeways, refineries, rail yards, ports) that should be considered when siting sensitive land uses such as residences.[3] CARB provides recommended site distances from certain types of facilities when considering siting new sensitive land uses. The recommendations are advisory and should not be interpreted as defined "buffer zones." If a project is within the siting distance, CARB recommends further analysis.

Where possible, CARB recommends a minimum separation between new sensitive land uses and existing sources. Some examples of CARB's siting recommendations include the following: (1) avoid

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1 California Air Resources Board, California Air Toxics Program, https://ww2.arb.ca.gov/our-work/programs/air-toxics-program, last reviewed by CARB September 24, 2015.

2 California Air Resources Board, Toxic Air Contaminant Identification List, https://ww2.arb.ca.gov/resources/documents/carb-identified-toxic-air-contaminants.

3 California Air Resources Board, Air Quality and Land Use Handbook, a Community Health Perspective, April 2005.

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); and (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.

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

Applicable requirements for the Proposed Project would include Section 2485 in Title 13 of the CCR, where the idling of all diesel-fueled commercial vehicles (with gross vehicle weight over 10,000 pounds) during construction would be limited to five minutes at any location. Pursuant to Section 93115 in Title 17 of the CCR, operation of any stationary, diesel-fueled, compression-ignition engines would meet specific fuel and fuel additive requirements and emissions standards.

Regional (South Coast Air Quality Management District)

The SCAQMD was created in 1977 to coordinate air quality planning efforts throughout Southern California. SCAQMD is the agency principally responsible for comprehensive air pollution control in the region. Specifically, SCAQMD is responsible for monitoring air quality, as well as planning, implementing, and enforcing programs designed to attain and maintain the CAAQS and NAAQS in the district. SCAQMD has jurisdiction over an area of 10,743 square miles consisting of Orange County; the non-desert portions of Los Angeles, Riverside, and San Bernardino counties; and the Riverside County portion of the Salton Sea Air Basin and Mojave Desert Air Basin. The Basin portion of SCAQMD's jurisdiction covers an area of 6,745 square miles. The Basin includes all of Orange County and the non-desert portions of Los Angeles (including the Project Area), Riverside, and San Bernardino counties.

Programs that were developed by SCAQMD to attain and maintain the CAAQS and NAAQS include air quality rules and regulations that regulate stationary sources, area sources, point sources, and certain mobile source emissions. SCAQMD is also responsible for establishing stationary source permitting requirements and for ensuring that new, modified, or relocated stationary sources do not create net emission increases. However, SCAQMD has primary authority over about 20 percent of NO_x emissions, a precursor to ozone formation. All projects in the SCAQMD jurisdiction are subject to SCAQMD rules and regulations, including, but not limited to the following:

- Rule 401 (Visible Emissions): This rule prohibits air discharge that results in a plume that is as dark as or darker than what is designed as No. 1 Ringelmann Chart by the United States Bureau of Mines for an aggregate of three minutes in any one hour.

- Rule 402 (Nuisance): This rule prohibits the discharge of "such quantities of air contaminants or other material which cause injury, detriment, nuisance, or annoyance to any considerable number of people or 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 mandates that projects reduce the amount of particulate matter entrained in the ambient air as a result of fugitive dust sources by requiring actions to prevent, reduce, or mitigate fugitive dust emissions from any active operation, open storage pile, or disturbed surface area.

- Rule 431.2 (Sulfur Content of Liquid Fuels): This rule would require use of low-sulfur fuel in construction equipment.

- Rule 445 (Wood Burning Devices: This would prohibit the inclusion of wood burning fireplaces in any residences.

- Rule 1113 Architectural Coatings: This rule limits the volatile organic compound (VOC) content of architectural coatings.

Air Quality Management Plan. SCAQMD adopted the 2022 Air Quality Management Plan (AQMP) on December 2, 2022, updating the region's air quality attainment plan to address the "extreme" ozone non-attainment status for the Basin and the severe ozone non-attainment for the Coachella Valley Basin by laying a path for attainment by 2037. This includes reducing NO_x emissions by 67 percent more than required by adopted rules and regulations in 2037. The AQMP calls on strengthening many stationary source controls and addressing new sources like wildfires, but still concludes that the region will not meet air quality standards without a significant shift to zero emission technologies and significant federal action. The 2022 AQMP relies on the growth assumptions in the Southern California Association of Governments' (SCAG) 2020-2045 Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS).

Multiple Air Toxics Exposure Study V. To date, the most comprehensive study on air toxics in the Basin is the Multiple Air Toxics Exposure Study V, released in August 2021.[4] The report included refinements in aircraft and recreational boating emissions and diesel conversion factors. It finds a Basin average cancer risk of 455 in a million (population-weighted, multi-pathway), which represents a decrease of 54 percent compared to the estimate in MATES IV. The monitoring program measured more than 30 air pollutants, including both gases and particulates. The monitoring study was accompanied by computer modeling that estimated the risk of cancer from breathing toxic air pollution based on emissions and weather data. About 88 percent of the risk is attributed to emissions associated with mobile sources, with the remainder attributed to toxics emitted from stationary sources, which include large industrial operations, such as refineries and metal processing facilities, as well as smaller businesses such as gas stations and chrome plating facilities. The results indicate that diesel PM is the largest contributor to air toxics risk, accounting on average for about 50 percent of the total risk.

[4] South Coast Air Quality Management District, MATES-V Study. https://www.aqmd.gov/home/air-quality/air-quality-studies/health-studies/mates-v

Regional (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 coordinates with air quality and transportation stakeholders in Southern California to ensure compliance with federal and state air quality requirements, including the Transportation Conformity Rule and other applicable federal, state, and air district laws and regulations. As the federally designated Metropolitan Planning Organization (MPO) for the six-county Southern California region, SCAG is required by law to ensure that transportation activities "conform" to, and are supportive of, the goals of regional and state air quality plans to attain the NAAQS. In addition, SCAG is a co-producer, with the SCAQMD, of the transportation strategy and transportation control measure sections of the AQMP for the Air Basin.

SCAG adopted the 2020-2045 RTP/SCS on September 23, 2020. The RTP/SCS addresses the transportation and air quality impacts of 3.7 million additional residents, 1.6 additional households, and 1.6 million additional jobs from 2016 to 2045. The Plan calls for $639 billion in transportation investments and reducing vehicle miles traveled (VMT) by 19 percent per capita from 2005 to 2035. The updated plan accommodates 21.3 percent growth in population from 2016 (3,933,800) to 2045 (4,771,300) and a 15.6 percent growth in jobs from 2016 (1,848,300) to 2045 (2,135,900). The regional plan projects several benefits:

- Decreasing drive-along work commutes by three percent
- Reducing per capita VMT by five percent and vehicle hours traveled per capita by nine percent
- Increasing transit commuting by two percent
- Reducing travel delay per capita by 26 percent
- Creating 264,500 new jobs annually
- Reducing greenfield development by 29 percent by focusing on smart growth
- Locating six more percent household growth in High Quality Transit Areas (HQTAs), which concentrate roadway repair investments, leverage transit and active transportation investments, reduce regional life cycle infrastructure costs, improve accessibility, create local jobs, and have the potential to improve public health and housing affordability.
- Locating 15 percent more jobs in HQTAs
- Reducing $PM_{2.5}$ emissions by 4.1 percent
- Reducing greenhouse gas (GHG) emissions by 19 percent by 2035

SCAG adopted the 2024-2050 RTP/SCS on April 4, 2024. The RTP/SCS addresses the transportation and air quality impacts of two million additional residents, 1.6 additional households, and 1.3 million additional jobs by 2050. The Plan calls for $751.7 billion in transportation investments and reducing vehicle miles traveled (VMT) and is the latest long-range plan, continuing to recognize that transportation investments and future land use patterns are inextricably linked, and acknowledging how this relationship can help the region make choices that sustain existing resources while expanding efficiency, mobility, and accessibility for people across the region. The 2024-2050 RTP/SCS offers a blueprint for how Southern California can grow more sustainably. To this end, the 2024-2050 RTP/SCS land use pattern continues the trend of focusing 66 percent of new households and 54 percent of new jobs in Priority Development Areas and the region's High Quality Transit Corridors (HQTCs) and aims to enhance and build out the region's transit network. HQTCs are a cornerstone of land use planning best practice in the SCAG region, and studies have found that focusing development in areas served by

transit can result in local, regional, and statewide benefits including reduced air pollution and energy consumption.

Local (City of Carson)

City of Carson General Plan. The Open Space and Environmental Conservation Element of the City's General Plan was adopted on April 4, 2023, and sets forth the goals, objectives, and policies, which guide the City in the implementation of air quality improvement programs and strategies. The Open Space and Environmental Conservation Element acknowledges the interrelationships among transportation and land use planning in meeting the City's mobility and air quality goals.

The Open Space and Environmental Conservation Element includes six key policies:

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.

Policy 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.

Policy 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.

Policy 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.

Policy 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.

Policy OSEC-G-22: Promote clean and alternative fuel combustion in City-owned mobile equipment and vehicles.

In addition, the Community Health and Environmental Justice Element of the General Plan includes additional policies that directly promote cleaner air:

Policy CHE-G-2: Reduce air pollution and the incidence of respiratory illness through the land use planning process.

Policy 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.

Policy CHE-G-4: Protect community health from pollution by toxics and hazardous materials, especially in areas with vulnerable or sensitive populations.

Policy CHE-P-5: 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.

Policy CHE-G-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.

Policy CHE-G-8: Avoid new toxin sources by stringently evaluating the siting of facilities that might significantly increase pollution, especially near already disproportionately impacted communities.

California Environmental Quality Act. In accordance with CEQA requirements, the City assesses the air quality impacts of new development projects, requires mitigation of potentially significant air quality impacts by conditioning discretionary permits, and monitors and enforces implementation of such mitigation. The City uses the SCAQMD's *CEQA Air Quality Handbook* and SCAQMD's supplemental online guidance/information for the environmental review of development proposals within its jurisdiction.

Existing Conditions

Pollutants and Effects

Air quality is defined by ambient air concentrations of seven specific pollutants identified by the USEPA to be of concern with respect to health and welfare of the general public. These specific pollutants, known as "criteria air pollutants," are defined as pollutants for which the federal and State governments have established ambient air quality standards, or criteria, for outdoor concentrations to protect public health. Criteria air pollutants include carbon monoxide (CO), ground-level ozone (O_3), nitrogen oxides (NO_X), sulfur oxides (SO_X), particulate matter ten microns or less in diameter (PM_{10}), particulate matter 2.5 microns or less in diameter ($PM_{2.5}$), and lead (Pb). The following descriptions of each criteria air pollutant and their health effects are based on information provided by the SCAQMD.[5]

Carbon Monoxide (CO). CO is primarily emitted from combustion processes and motor vehicles due to incomplete combustion of fuel. Elevated concentrations of CO weaken the heart's contractions and lower the amount of oxygen carried by the blood. It is especially dangerous for people with chronic heart disease. Inhalation of CO can cause nausea, dizziness, and headaches at moderate concentrations and can be fatal at high concentrations.

Ozone (O_3). O_3 is a gas that is formed when volatile organic compounds (VOCs) and nitrogen oxides (NO_X)—both byproducts of internal combustion engine exhaust—undergo slow photochemical reactions in the presence of sunlight. O_3 concentrations are generally highest during the summer months when direct sunlight, light wind, and warm temperature conditions are favorable. An elevated level of O_3 irritates the lungs and breathing passages, causing coughing and pain in the chest and throat, thereby increasing susceptibility to respiratory infections and reducing the ability to exercise. Effects are more

[5] South Coast Air Quality Management District, Final Program Environmental Impact Report for the 2012 AQMP, December 7, 2012.

severe in people with asthma and other respiratory ailments. Long-term exposure may lead to scarring of lung tissue and may lower lung efficiency.

Nitrogen Dioxide (NO_2). NO_2 is a byproduct of fuel combustion and major sources include power plants, large industrial facilities, and motor vehicles. The principal form of nitrogen oxide produced by combustion is nitric oxide (NO), which reacts quickly to form NO_2, creating the mixture of NO and NO_2 commonly called NO_X. NO_2 absorbs blue light and results in a brownish-red cast to the atmosphere and reduced visibility. NO_2 also contributes to the formation of PM_{10}. Nitrogen oxides irritate the nose and throat, and increase one's susceptibility to respiratory infections, especially in people with asthma. The principal concern of NO_X is as a precursor to the formation of ozone.

Sulfur Dioxide (SO_2). Sulfur oxides (SO_X) are compounds of sulfur and oxygen molecules. SO_2 is the pre- dominant form found in the lower atmosphere and is a product of burning sulfur or burning materials that contain sulfur. Major sources of SO_2 include power plants, large industrial facilities, diesel vehicles, and oil-burning residential heaters. Emissions of sulfur dioxide aggravate lung diseases, especially bronchitis. It also constricts the breathing passages, especially in asthmatics and people involved in moderate to heavy exercise. SO_2 potentially causes wheezing, shortness of breath, and coughing. High levels of particulates appear to worsen the effect of sulfur dioxide, and long-term exposures to both pollutants leads to higher rates of respiratory illness.

Particulate Matter (PM_{10} and $PM_{2.5}$). The human body naturally prevents the entry of larger particles into the body. However, small particles, with an aerodynamic diameter equal to or less than 10 microns (PM_{10}), and even smaller particles with an aerodynamic diameter equal to or less than 2.5 microns ($PM_{2.5}$), can enter the body and become trapped in the nose, throat, and upper respiratory tract. These small particulates can potentially aggravate existing heart and lung diseases, change the body's defenses against inhaled materials, and damage lung tissue. The elderly, children, and those with chronic lung or heart disease are most sensitive to PM_{10} and $PM_{2.5}$. Lung impairment can persist for two to three weeks after exposure to high levels of particulate matter. Some types of particulates can become toxic after inhalation due to the presence of certain chemicals and their reaction with internal body fluids.

Lead (Pb). Lead is emitted from industrial facilities and from the sanding or removal of old lead-based paint. Smelting or processing the metal is the primary source of lead emissions, which is primarily a regional pollutant. Lead affects the brain and other parts of the body's nervous system. Exposure to lead in very young children impairs the development of the nervous system, kidneys, and blood forming processes in the body.

State-Only Criteria Pollutants

Visibility-Reducing Particles. Deterioration of visibility is one of the most obvious manifestations of air pollution and plays a major role in the public's perception of air quality. Visibility reduction from air pollution is often due to the presence of sulfur and NO_X, as well as PM.

Sulfates (SO_4^{2-}). Sulfates are the fully oxidized ionic form of sulfur. Sulfates occur in combination with metal and/or hydrogen ions. In California, emissions of sulfur compounds occur primarily from the combustion of petroleum-derived fuels (e.g., gasoline and diesel fuel) that contain sulfur. This sulfur is oxidized during the combustion process and subsequently converted to sulfate compounds in the

atmosphere. Effects of sulfate exposure at levels above the standard include a decrease in ventilatory function, aggravation of asthmatic symptoms, and an increased risk of cardio-pulmonary disease. Sulfates are particularly effective in degrading visibility, and, due to fact that they are usually acidic, can harm ecosystems and damage materials and property.

Hydrogen Sulfide (H_2S). H_2S is a colorless gas with the odor of rotten eggs. It is formed during bacterial decomposition of sulfur-containing organic substances. Also, it can be present in sewer gas and some natural gas and can be emitted as the result of geothermal energy exploitation. Breathing H_2S at levels above the state standard could result in exposure to a very disagreeable odor.

Vinyl Chloride. Vinyl chloride is a colorless, flammable gas at ambient temperature and pressure. It is also highly toxic and is classified as a known carcinogen by the American Conference of Governmental Industrial Hygienists and the International Agency for Research on Cancer. At room temperature, vinyl chloride is a gas with a sickly-sweet odor that is easily condensed. However, it is stored at cooler temperatures as a liquid. Due to the hazardous nature of vinyl chloride to human health, there are no end products that use vinyl chloride in its monomer form. Vinyl chloride is a chemical intermediate, not a final product. It is an important industrial chemical chiefly used to produce polyvinyl chloride (PVC). The process involves vinyl chloride liquid fed to polymerization reactors where it is converted from a monomer to a polymer PVC. The final product of the polymerization process is PVC in either a flake or pellet form. Billions of pounds of PVC are sold on the global market each year. From its flake or pellet form, PVC is sold to companies that heat and mold the PVC into end products such as PVC pipe and bottles. Vinyl chloride emissions are historically associated primarily with landfills.

Toxic Air Contaminants (TACs)

TACs refer to a diverse group of “non-criteria” air pollutants that can affect human health but have not had ambient air quality standards established for them. This is not because they are fundamentally different from the pollutants discussed above but because their effects tend to be local rather than regional. TACs are classified as carcinogenic and noncarcinogenic, where carcinogenic TACs can cause cancer and noncarcinogenic TAC can cause acute and chronic impacts to different target organ systems (e.g., eyes, respiratory, reproductive, developmental, nervous, and cardiovascular). CARB and OEHHA determine if a substance should be formally identified, or “listed,” as a TAC in California. A complete list of these substances is maintained on CARB’s website.[6]

Diesel particulate matter (DPM), which is emitted in the exhaust from diesel engines, was listed by the state as a TAC in 1998. DPM has historically been used as a surrogate measure of exposure for all diesel exhaust emissions. DPM consists of fine particles (diameter less than 2.5 micrometer (μm)), including a subgroup of ultrafine particles (diameter less than 0.1 μm). Collectively, these particles have a large surface area which makes them an excellent medium for absorbing organics. The visible emissions in diesel exhaust include carbon particles or “soot.” Diesel exhaust also contains a variety of harmful gases and cancer-causing substances.

Exposure to DPM may be a health hazard, particularly to children whose lungs are still developing and the elderly who may have other serious health problems. DPM levels and resultant potential health

[6] California Air Resources Board, Toxic Air Contaminant Identification List, https://ww2.arb.ca.gov/resources/documents/carb-identified-toxic-air-contaminants.

effects may be higher in close proximity to heavily traveled roadways with substantial truck traffic or near industrial facilities. According to CARB, DPM exposure may lead to the following adverse health effects: (1) aggravated asthma; (2) chronic bronchitis; (3) increased respiratory and cardiovascular hospitalizations; (4) decreased lung function in children; (5) lung cancer; and (6) premature deaths for people with heart or lung disease.[7,8]

Project Site

The Project Site is located within the South Coast Air Basin (the Basin); named so because of its geographical formation is that of a basin, with the surrounding mountains trapping the air and its pollutants in the valleys or basins below. The 6,745-square-mile Basin includes all of Orange County and the non-desert portions of Los Angeles, Riverside, and San Bernardino Counties. It is bounded by the Pacific Ocean to the west; the San Gabriel, San Bernardino and San Jacinto Mountains to the north and east; and the San Diego County line to the south. Ambient pollution concentrations recorded in Los Angeles County portion of the Basin are among the highest in the four counties comprising the Basin. USEPA has classified Los Angeles County as nonattainment areas for O_3, $PM_{2.5}$, and lead. This classification denotes that the Basin does not meet the NAAQS for these pollutants. In addition, under the CCAA, the Los Angeles County portion of the Basin is designated as a nonattainment area for O_3, PM_{10}, and $PM_{2.5}$. The air quality within the Basin is primarily influenced by a wide range of emissions sources, such as dense population centers, heavy vehicular traffic, industry, and meteorology.

Air pollutant emissions are generated in the local vicinity by stationary and area-wide sources, such as commercial activity, space and water heating, landscaping maintenance, consumer products, and mobile sources primarily consisting of automobile traffic.

Air Pollution Climatology. The topography and climate of Southern California combine to make the Basin an area of high air pollution potential. During the summer months, a warm air mass frequently descends over the cool, moist marine layer produced by the interaction between the ocean's surface and the lowest layer of the atmosphere. The warm upper layer forms a cap over the cooler surface layer which inhibits the pollutants from dispersing upward. Light winds during the summer further limit ventilation. Additionally, abundant sunlight triggers photochemical reactions which produce O_3 and the majority of particulate matter.

Air Monitoring Data. The SCAQMD monitors air quality conditions at 38 source receptor areas (SRA) throughout the Basin. The Project Site is located in SCAQMD's South Coastal LA receptor area. Historical data from the area was used to characterize existing conditions in the vicinity of the Project area. Table 2 shows pollutant levels, State and federal standards, and the number of exceedances recorded in the area from 2021 through 2023. The one-hour State standard for O_3 was exceeded once during this three-year period. The federal standard was exceeded once in that same period. In addition, the daily State standard for PM_{10} was exceeded 69 times, exclusively in 2022 and 2023. The daily federal standard for $PM_{2.5}$ was exceeded four times. CO, SO_2, and NO_2 levels did not exceed the CAAQS from 2021 to 2023 for 1-hour (and 8-hour for CO).

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7 California Air Resources Board, Overview: Diesel Exhaust and Health, www.arb.ca.gov/research/diesel/diesel-health.htm, last reviewed by CARB April 12, 2016.

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

Table 2
Ambient Air Quality Data

Pollutants and State and Federal Standards	Maximum Concentrations and Frequencies of Exceedance Standards		
	2021	2022	2023
Ozone (O_3)			
Maximum 1-hour Concentration (ppm)	0.086	0.108	0.089
Days > 0.09 ppm (State 1-hour standard)	0	1	0
Days > 0.070 ppm (Federal 8-hour standard)	0	1	0
Carbon Monoxide (CO_2)			
Maximum 1-hour Concentration (ppm)	N/A	N/A	N/A
Days > 20 ppm (State 1-hour standard)	0	0	0
Maximum 8-hour Concentration (ppm)	N/A	N/A	N/A
Days > 9.0 ppm (State 8-hour standard)	0	0	0
Nitrogen Dioxide (NO_2)			
Maximum 1-hour Concentration (ppm)	0.0590	0.0581	0.0562
Days > 0.18 ppm (State 1-hour standard)	0	0	0
PM_{10}			
Maximum 24-hour Concentration (µg/m^3)	48	128	148
Days > 50 µg/m^3 (State 24-hour standard)	0	33	36
$PM_{2.5}$			
Maximum 24-hour Concentration (µg/m^3)	42.9	28.8	26.5
Days > 35 µg/m^3 (Federal 24-hour standard)	4	0	0
Sulfur Dioxide (SO_2)			
Maximum 1-hour Concentration (ppb)	3.9	6.1	23.2
Days > 0.25 ppm (State 1-hour standard)	0	0	0

ppm = parts by volume per million of air.
µg/m^3 = micrograms per cubic meter.
N/A = not available at this monitoring station.
Source: SCAQMD annual monitoring data at South Coastal LA subregion (http://www.aqmd.gov/home/air-quality/air-quality-data-studies/historical-data-by-year) accessed August 27, 2024. Values represent the highest of the four monitoring stations in the subregion.

Existing Health Risk in the Surrounding Area. Based on the MATES-V model, the calculated cancer risk in the Project area (zip code 90745) is approximately 577 in a million.[9] The cancer risk in this area is predominantly influenced by nearby sources of diesel particulate matter (e.g., diesel trucks and traffic on the San Diego Freeway 85 feet to the east). In general, the risk at the Project Site is higher than 88 percent of the population across the South Coast Air Basin.

The Office of Environmental Health Hazard Assessment, on behalf of the California Environmental Protection Agency (CalEPA), provides a screening tool called CalEnviroScreen that can be used to help identify California communities disproportionately burdened by multiple sources of pollution. According

[9] South Coast Air Quality Management District, Multiple Air Toxics Exposure Study in the South Coast Air Basin (MATES-V), MATES V Interactive Carcinogenicity Map, 2021, https://experience.arcgis.com/experience/79d3b6304912414bb21ebdde80100b23/page/home/?data_id=dataSource_105-a5ba9580e3aa43508a793fac819a5a4d%3A26&views=view_39%2Cview_1, accessed August 28, 2024.

to CalEnviroScreen, the Project Site (Census tract 6037543903) is located in the 92nd percentile, which means the Project Site has an overall environmental pollution burden higher than at least 92 percent of other communities within California.[10]

Sensitive Receptors. Some land uses are considered more sensitive to changes in air quality than others, depending on the population groups and the activities involved. CARB has identified several groups that are most likely to be affected by air pollution: children less than 14 years of age, the elderly over 65 years of age, athletes, and people with cardiovascular and chronic respiratory diseases. According to the SCAQMD, sensitive receptors include residences, schools, playgrounds, childcare centers, athletic facilities, long-term health care facilities, rehabilitation centers, convalescent centers, and retirement homes.

The Project Site is located on the Avalon Boulevard corridor that is home to a mix of residential and commercial uses. Sensitive receptors within 0.25 miles of the Project Site include, but are not limited to, the following representative sampling:

- Residences, Garston Avenue; 75 feet south of the Project Site.
- Bel-Aire Park mobile homes, 21425 Avalon Boulevard; 430 feet southwest of the Project Site.
- Residences, 213th Street; 720 feet west of the Project Site.
- Motel 6; 820 feet northeast of the Project Site across the San Diego Freeway

Existing Project Site Emissions. The Project Site is improved with five buildings that house commercial uses, including a used car facility and new car dealership. While there are criteria pollutant emissions from the operation of these buildings (e.g., heating and cooling buildings, mobile sources), this analysis does not "credit" the reduction of emissions from these existing uses that would be removed to ensure a conservative analysis of gross emissions associated with the redevelopment of the Project Site.

Project Impacts

Methodology

The air quality analysis conducted for the Project is consistent with the methods described in the SCAQMD CEQA Air Quality Handbook (1993 edition), as well as the updates to the CEQA Air Quality Handbook, as provided on the SCAQMD website. The SCAQMD recommends the use of the California Emissions Estimator Model (CalEEMod) as a tool for quantifying emissions of air pollutants that will be generated by constructing and operating development projects. The analyses focus on the potential emissions from construction and operation of the Project. Methodologies used to evaluate these emissions are discussed below.

Construction. Sources of air pollutant emissions associated with construction activities include heavy-duty off-road diesel equipment and vehicular traffic to and from the Project construction site. Where available, project-specific information was provided on the schedule of construction activities and the anticipated equipment inventory. Otherwise, model default values were used for equipment usage rates, worker trip lengths, emission factors for heavy-duty equipment, passenger vehicles, and haul trucks that have been derived by CARB. Maximum daily emissions were quantified for each construction activity

[10] Office of Environmental Health Hazard Assessment, https://oehha.ca.gov/calenviroscreen/report/calenviroscreen-40, accessed August 28, 2024.

based on the number of equipment and daily hours of use, in addition to vehicle trips to and from the Project Site. Details pertaining to the schedule and equipment can be found in the Technical Appendix to this analysis.

The SCAQMD recommends that air pollutant emissions be assessed for both regional scale and localized impacts. The regional emissions analysis includes both on-site and off-site sources of emissions, while the localized emissions analysis focuses only on sources of emissions that would be located on the Project Site.

Localized impacts were analyzed in accordance with the SCAQMD Localized Significance Threshold (LST) methodology.[11] The localized effects from on-site portion of daily emissions were evaluated at sensitive receptor locations potentially impacted by the Project according to the SCAQMD's LST methodology, which uses on-site mass emission look-up tables and Project-specific modeling, where appropriate.[12] SCAQMD provides LSTs applicable to the following criteria pollutants: NO_X, CO, PM_{10}, and $PM_{2.5}$. SCAQMD does not provide an LST for SO_2 since land use development projects typically result in negligible construction and long-term operation emissions of this pollutant. Since VOCs are not a criteria pollutant, there is no ambient standard or SCAQMD LST for VOCs. Due to the role VOCs play in O_3 formation, it is classified as a precursor pollutant, and only a regional emissions threshold has been established.

LSTs represent the maximum emissions from a project that are not expected to cause or contribute to an exceedance of the most stringent applicable federal or state ambient air quality standard and are developed based on the ambient concentrations of that pollutant for each source receptor area and distance to the nearest sensitive receptor. The mass rate look-up tables were developed for each source receptor area and can be used to determine whether or not a project may generate significant adverse localized air quality impacts. SCAQMD provides LST mass rate look-up tables for projects with active construction areas that are less than or equal to five acres. If the project exceeds the LST look-up values, then the SCAQMD recommends that project-specific air quality modeling must be performed. Please refer to **Threshold b** below, for the analysis of localized impacts from on-site construction activities. In accordance with SCAQMD guidance, maximum daily emissions of NO_X, CO, PM_{10}, and $PM_{2.5}$ from on-site sources during each construction activity were compared to LST values for a five-acre site having sensitive receptors within 25 meters (82 feet).[13] This is appropriate given the 14.07-acre site and the proximity of sensitive receptors as close as 75 feet from the Project Site.

The Basin is divided into 38 SRAs, each with its own set of maximum allowable LST values for on-site emissions sources during construction and operations based on locally monitored air quality. Maximum on-site emissions resulting from construction activities were quantified and assessed against the applicable LST values.

The significance criteria and analysis methodologies in the SCAQMD's CEQA Air Quality Handbook were used in evaluating impacts in the context of the CEQA significance criteria listed below. The

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11 South Coast Air Quality Management District, Final Localized Significance Methodology, revised July 2008.

12 South Coast Air Quality Management District, LST Methodology Appendix C-Mass Rate LST Look-Up Table, https://www.aqmd.gov/docs/default-source/ceqa/handbook/localized-significance-thresholds/appendix-c-mass-rate-lst-look-up-tables.pdf?sfvrsn=2, October 2009.

13 South Coast Air Quality Management District, Fact Sheet for Applying CalEEMod to Localized Significance Thresholds, https://www.aqmd.gov/docs/default-source/ceqa/handbook/localized-significance-thresholds/caleemod-guidance.pdf, 2008.

SCAQMD LSTs for NO_2, CO, and PM_{10} were initially published in June 2003 and revised in July 2008.[14] The LSTs for $PM_{2.5}$ were established in October 2006 and updated on October 21, 2009.[15] [16] Table 3 presents the significance criteria for both construction and operational emissions.

Table 3
SCAQMD Emissions Thresholds

Criteria Pollutant	Construction Emissions		Operation Emissions	
	Regional	Localized /a/	Regional	Localized /a/
Volatile Organic Compounds (VOC)	75	--	55	--
Nitrogen Oxides (NO_X)	100	123	55	123
Carbon Monoxide (CO)	550	1,530	550	1,530
Sulfur Oxides (SO_X)	150	--	150	--
Respirable Particulates (PM_{10})	150	14	150	4
Fine Particulates ($PM_{2.5}$)	55	8	55	2

/a/ Localized significance thresholds assumed a five-acre and 25-meter (82-foot) receptor distance in the South Coastal LA source receptor area. The SCAQMD has not developed LST values for VOC or SO_X. Pursuant to SCAQMD guidance, this analysis uses a five-acre threshold as it assumes a maximum daily disturbed acreage of at least five acres (SCAQMD Fact Sheet for Applying CalEEMod to Localized Significance Thresholds)

Source: SCAQMD, South Coast AQMD Air Quality Significance Thresholds, 2023

Operations. CalEEMod also generates estimates of daily and annual emissions of air pollutants resulting from future operation of a project. Operational emissions are produced by mobile sources (vehicular travel) and stationary sources (e.g., utilities demand). Utilities for the Project Site are provided by Southern California Edison (SCE) for electricity and Southern California Gas for natural gas, where applicable. CalEEMod has derived default emissions factors for electricity and natural gas use that are applied to the size and land use type of the Project. CalEEMod also estimates operational emissions associated with water use, wastewater generation, and solid waste disposal.

Similar to construction, SCAQMD's CalEEMod software was used for the evaluation of Project emissions during operation. CalEEMod was used to calculate on-road fugitive dust, architectural coatings, landscape equipment, energy use, mobile source, and stationary source emissions.[17] To determine if a significant air quality impact would occur, the net increase in regional and local operational emissions

14 Ibid.

15 South Coast Air Quality Management District, Final – Methodology to Calculate Particulate Matter (PM) 2.5 and PM 2.5 Significance Thresholds, https://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, October 2006.

16 South Coast Air Quality Management District, Final Localized Significance Threshold Methodology Appendix C – Mass Rate LST Look-Up Tables, https://www.aqmd.gov/docs/default-source/ceqa/handbook/localized-significance-thresholds/appendix-c-mass-rate-lst-look-up-tables.pdf?sfvrsn=2, October 21, 2009.

17 Energy consumption estimates with CalEEMod 2022.1.1.26 are based on the California Energy Commission's 2020 Residential Appliance Saturation Survey (residential uses) and 2021 Commercial Forecast database, both of which reflected the 2019 Title 24 energy efficiency standards. These energy consumption estimates were adjusted to reflect the 2022 Title 24 standards that cumulatively produce a 0.49 percent reduction in electricity use and 0.45 percent reduction in natural gas use when compared to the 2019 standards.

generated by the Project was compared against SCAQMD's significance thresholds.[18] Details describing the operational emissions of the Project can be found in in the Technical Appendix.

Toxic Air Contaminants Impacts (Construction and Operations). Potential TAC impacts are evaluated by conducting a qualitative analysis consistent with the CARB Handbook followed by a more detailed analysis (i.e., dispersion modeling), as necessary. The qualitative analysis consists of reviewing the Project to identify any new or modified TAC emissions sources. If the qualitative evaluation does not rule out significant impacts from a new source, or modification of an existing TAC emissions source, a more detailed analysis is conducted.

Thresholds of Significance

State CEQA Guidelines Appendix G

Would the Project:

a) *Conflict with or obstruct implementation of the applicable air quality plan;*

b) *Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or State ambient air quality standard;*

c) *Expose sensitive receptors to substantial pollutant concentrations; or*

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

City and SCAQMD Thresholds

For this analysis the Appendix G Thresholds are relied upon. The analysis utilizes factors and considerations recommended by the City of Carson and SCAQMD Thresholds, as appropriate, to assist in answering the Appendix G Threshold questions.

(a) Construction

The City recommends that determination of significance be made on a case-by-case basis, considering the following criteria to evaluate construction-related air emissions:

(i) Combustion Emissions from Construction Equipment

- Type, number of pieces and usage for each type of construction equipment;
- Estimated fuel usage and type of fuel (diesel, natural gas) for each type of equipment; and
- Emission factors for each type of equipment.

(ii) Fugitive Dust—Grading, Excavation and Hauling

[18] South Coast Air Quality Management District, Air Quality Significance Thresholds, revised March 2015. SCAQMD based these thresholds, in part on the federal Clean Air Act and, to enable defining "significant" for CEQA purposes, defined the setting as the South Coast Air Basin. (See SCAQMD, CEQA Air Quality Handbook, April 1993, pp. 6-1-6-2).

- Amount of soil to be disturbed on-site or moved off-site;
- Emission factors for disturbed soil;
- Duration of grading, excavation and hauling activities;
- Type and number of pieces of equipment to be used; and
- Projected haul route.

(iii) Fugitive Dust—Heavy-Duty Equipment Travel on Unpaved Road

- Length and type of road;
- Type, number of pieces, weight and usage of equipment; and
- Type of soil.

(iv) Other Mobile Source Emissions

- Number and average length of construction worker trips to Project Site, per day; and
- Duration of construction activities.

In addition, the following criteria set forth in the SCAQMD's *CEQA Air Quality Handbook* serve as quantitative air quality standards to be used to evaluate project impacts under the Appendix G Thresholds. Under these thresholds, a significant threshold would occur when:[19]

- Regional emissions from both direct and indirect sources would exceed any of the following SCAQMD prescribed threshold levels: (1) 100 pounds per day for NO_X; (2) 75 pounds a day for VOC; (3) 150 pounds per day for PM_{10} or SO_X; (4) 55 pounds per day for $PM_{2.5}$; and (5) 550 pounds per day for CO.

- Maximum on-site daily localized emissions exceed the LST, resulting in predicted ambient concentrations in the vicinity of the Project Site greater than the most stringent ambient air quality standards for CO (20 ppm [23,000 µg/m^3] over a 1-hour period or 9.0 ppm [10,350 µg/m^3] averaged over an 8-hour period) and NO_2 (0.18 ppm [339 µg/m^3] over a 1-hour period, 0.1 ppm [188 µg/m^3] over a three-year average of the 98th percentile of the daily maximum 1-hour average, or 0.03 ppm [57 µg/m^3] averaged over an annual period).

- Maximum on-site localized PM_{10} or $PM_{2.5}$ emissions during construction exceed the applicable LSTs, resulting in predicted ambient concentrations in the vicinity of the Project Site to exceed the incremental 24-hour threshold of 10.4 µg/m^3 or 1.0 µg/m^3 PM_{10} averaged over an annual period.

(b) Operation

The City bases the determination of significance of operational air quality impacts on criteria set forth in the SCAQMD's *CEQA Air Quality Handbook.*[20] As discussed above, the City uses Appendix G as the thresholds of significance for this analysis. Accordingly, the following serve as quantitative air quality

[19] South Coast Air Quality Management District, Air Quality Significance Thresholds, revised March 2015.
[20] South Coast Air Quality Management District, Air Quality Significance Thresholds, revised March 2015.

standards to be used to evaluate project impacts under the Appendix G thresholds. Under these thresholds, a significant threshold would occur when:

- Operational emissions exceed 10 tons per year of volatile organic gases or any of the following SCAQMD prescribed threshold levels: (1) 55 pounds a day for VOC;[21] (2) 55 pounds per day for NO_X; (3) 550 pounds per day for CO; (4) 150 pounds per day for SO_X; (5) 150 pounds per day for PM_{10}; and (6) 55 pounds per day for $PM_{2.5}$.[22]

- Maximum on-site daily localized emissions exceed the LST, resulting in predicted ambient concentrations in the vicinity of the Project Site greater than the most stringent ambient air quality standards for CO (20 parts per million (ppm) over a 1-hour period or 9.0 ppm averaged over an 8-hour period) and NO_2 (0.18 ppm over a 1-hour period, 0.1 ppm over a 3-year average of the 98th percentile of the daily maximum 1-hour average, or 0.03 ppm averaged over an annual period).[23]

- Maximum on-site localized operational PM_{10} and $PM_{2.5}$ emissions exceed the incremental 24-hour threshold of 2.5 µg/m^3 or 1.0 µg/m^3 PM_{10} averaged over an annual period.[24]

- The Project causes or contributes to an exceedance of the California 1-hour or 8-hour CO standards of 20 or 9.0 ppm, respectively; or

- The Project creates an odor nuisance pursuant to SCAQMD Rule 402.

(c) Toxic Air Contaminants

The City recommends that the determination of significance shall be made on a case-by-case basis, considering the following criteria to evaluate TACs:

- Would the project use, store, or process carcinogenic or non-carcinogenic toxic air contaminants which could result in airborne emissions?

In assessing impacts related to TACs in this section, the City uses Appendix G as the thresholds of significance. The criteria identified above will be used where applicable and relevant to assist in analyzing the Appendix G thresholds. In addition, the following criteria set forth in the SCAQMD's *CEQA Air Quality Handbook* serve as quantitative air quality standards to be used to evaluate project impacts under Appendix G thresholds. Under these thresholds, a significant threshold would occur when:[25]

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21 For purposes of this analysis, emissions of VOC and reactive organic compounds (ROG) are used interchangeably since ROG represents approximately 99.9 percent of VOC emissions.

22 South Coast Air Quality Management District, Quality Significance Thresholds, www.aqmd.gov/docs/default-source/ceqa/handbook/scaqmd-air-quality-significance-thresholds.pdf, last updated March 2015.

23 South Coast Air Quality Management District, Final Localized Significance Threshold Methodology, revised July 2008.

24 South Coast Air Quality Management District, Final—Methodology to Calculate Particulate Matter (PM) 2.5 and $PM_{2.5}$ Significance Thresholds, October 2006.

25 South Coast Air Quality Management District, CEQA Air Quality Handbook, April 1993, Chapter 6 (Determining the Air Quality Significance of a Project) and Chapter 10 (Assessing Toxic Air Pollutants).

- The Project results in the exposure of sensitive receptors to carcinogenic or toxic air contaminants that exceed the maximum incremental cancer risk of 10 in one million or an acute or chronic hazard index of 1.0.[26] For projects with a maximum incremental cancer risk between 1 in one million and 10 in one million, a project would result in a significant impact if the cancer burden exceeds 0.5 excess cancer cases.

(d) Consistency with Applicable Air Quality Plans

CEQA Guidelines Section 15125 requires an analysis of project consistency with applicable governmental plans and policies. This analysis is conducted to assess potential project impacts against Threshold (a) from the Appendix G thresholds. In accordance with the SCAQMD's *CEQA Air Quality Handbook*, the following criteria are used to evaluate a project's consistency with the AQMP:[27]

- Will the Project result in any of the following:
  - An increase in the frequency or severity of existing air quality violations;
  - Cause or contribute to new air quality violations; or
  - Delay timely attainment of air quality standards or the interim emission reductions specified in the AQMP?
- Will the Project exceed the assumptions utilized in preparing the AQMP?
  - Is the Project consistent with the population and employment growth projections upon which AQMP forecasted emission levels are based;
  - Does the Project include air quality mitigation measures; or
  - To what extent is Project development consistent with the AQMP land use policies?

The Project's impacts with respect to these criteria are discussed to assess the consistency with the SCAQMD's AQMP and SCAG regional plans and policies. In addition, the Project's consistency with the City of Carson General Plan.

Project Design Features. The Project would comply with the 2022 Carson Building Code which incorporates the standards set in the 2022 California Green Building Standards Code (CalGreen, effective January 1, 2023).[28] Construction in later years could be subject to the future 2025 Building Code and CalGreen standards. Further energy efficiency and sustainability features would include native plants and drip/subsurface irrigation systems, individual metering or sub metering for water use, leak detection systems, and electric vehicle charging capacity.

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[26] Hazard index is the ratio of a toxic air contaminant's concentration divided by its Reference Concentration, or safe exposure level. If the hazard index exceeds one, people are exposed to levels of TACs that may pose noncancer health risks.

[27] South Coast Air Quality Management District, CEQA Air Quality Handbook, April 1993, p. 12-3.

[28] California Building Codes: http://www.bsc.ca.gov/Codes.aspx.

Analysis of Project Impacts

a. Would the Project conflict with or obstruct implementation of the applicable air quality plan?

Less Than Significant Impact. The Project's air quality emissions would not exceed any State or federal standards. Therefore, the Project would not increase the frequency or severity of an existing violation or cause or contribute to new violations for these pollutants. As the Project would not exceed any State and federal standards, the Project would also not delay timely attainment of air quality standards or interim emission reductions specified in the AQMP.

With respect to the determination of consistency with AQMP growth assumptions, the projections in the AQMP for achieving air quality goals are based on assumptions in SCAG's 2020-2045 RTP/SCS regarding population, housing, and growth trends.[29] Determining whether a project exceeds the assumptions reflected in the AQMP involves the evaluation of three criteria: (1) consistency with applicable population, housing, and employment growth projections; (2) project mitigation measures; and (3) appropriate incorporation of AQMP land use planning strategies. The following discussion provides an analysis with respect to each of these three criteria.

- Is the project consistent with the population, housing, and employment growth projections upon which AQMP forecasted emission levels are based?

A project is consistent with the AQMP, in part, if it is consistent with the population, housing, and employment assumptions that were used in the development of the AQMP. In the case of the 2022 AQMP, two sources of data form the basis for the projections of air pollutant emissions: the City of Carson General Plan and SCAG's RTP. The General Plan serves as a comprehensive, long-term plan for future development of the City.

The 2020-2045 RTP/SCS provides socioeconomic forecast projections of regional population growth. The population, housing, and employment forecasts, which are adopted by SCAG's Regional Council, are based on local plans and policies applicable to the specific area; these are used by SCAG in all phases of implementation and review. The 2020-2045 RTP/SCS accommodates a total of 105,200 persons; 30,700 households; and 70,000 jobs in the City of Carson by 2045.

On April 4, 2024, SCAG adopted the 2024-2050 RTP/SCS, which accommodates 100,200 persons; 31,400 households; and 62,300 jobs in the City of Carson by 2050. Once the 2022 AQMP is updated with these growth forecasts, consistency with the projections in the applicable air quality plan for the region will be based on the 2024-2050 RTP/SCS.

The City provided local growth forecasts that were incorporated into the regional projections. The Housing Element describes the "Kott Site" as a "pipeline" project and assumes it will provide 1,320 residential units. As such, the RTP/SCS' assumptions about growth in the City accommodate the projected population and housing on the Project Site. As a result, the Project would be consistent with the growth assumptions in the City's General Plan. Because the AQMP accommodates growth forecasts from local General Plans, the emissions associated with this Project are accounted for and mitigated in

[29] While SCAG adopted the 2024-2050 RTP/SCS on April 4, 2024, the region's applicable air quality plan is the 2022 AQMP, which is based on the growth assumptions of the 2020-2045 RTP/SCS. Once the 2022 AQMP is updated with these growth forecasts, consistency with the projections in the applicable air quality plan for the region will be based on the 2024-2050 RTP/SCS.

the region's air quality attainment plans. The air quality impacts of development on the Project Site are accommodated in the region's emissions inventory for the 2020-2045 RTP/SCS and 2022 AQMP

Based on the average 2045 persons-per-household rate for the City of 3.43 persons per household,[30] the Project would add a residential population of approximately 1,070 people to the Project Site based on the 312 dwelling units proposed. The Project's residential population would represent approximately 9.2 percent of the forecast population growth of 11,600 between 2016 and 2045 and be consistent with the local growth assumptions that formed the basis of the region's AQMP.

- Does the project implement feasible air quality mitigation measures?

As discussed below under Thresholds (b), (c), and (d), the Project would not result in any significant air quality impacts and therefore would not require mitigation. In addition, the Project would comply with all applicable regulatory standards as required by SCAQMD. Furthermore, with compliance with the regulatory requirements identified above, no significant air quality impacts would occur. As such, the proposed Project meets this AQMP consistency criterion.

- To what extent is project development consistent with the land use policies set forth in the AQMP?

With regard to land use developments, the AQMP's air quality policies focus on the reduction of vehicle trips and VMT. The Project would implement a number of land use policies of the City of Carson, SCAQMD, and SCAG, as it would be designed and constructed to support and promote environmental sustainability. The Project represents an infill development within an urbanized area that would concentrate more housing and population within a HQTA. "Green" principles are incorporated throughout the Project to comply with the City of Carson Green Building Code and CALGreen through energy conservation, water conservation, and waste reduction features.

The air quality plan applicable to the Project area is the 2022 AQMP, the current management plan for progression toward compliance with State and federal clean air requirements. The Project would be required to comply with all regulatory measures set forth by the SCAQMD. Implementation of the Project would not interfere with air pollution control measures listed in the 2022 AQMP. As noted earlier, the Project is consistent with the land use policies of the City that were reflected in the regional growth projections for the AQMP. As demonstrated in the following analysis, the Project would not result in significant emissions that would jeopardize regional or localized air quality standards.

City of Carson Policies

The Project would offer convenient access to public transit and opportunities for walking and biking (including the provision of bicycle parking), thereby facilitating a reduction in VMT. In addition, the Project would be consistent with the existing land use pattern in the vicinity that concentrates urban density along major arterials and near transit options and would help reduce air quality emissions in several ways:

- The Project Site is within a HQTA, which reflects areas with rail transit service or bus service

[30] Southern California Association of Governments, 2020-2045 Regional Transportation Plan, Demographics and Growth Forecast Technical Report; September 3, 2020.

where lines have peak headways of less than 15 minutes.[31]

- There is substantial public transit service in the area, including:
  - Long Beach Transit Route 2 provides north-south circulator service in Carson, with the closest bus stop on Avalon Boulevard at 213th Street in front of the Project Site.
  - Los Angeles County Metropolitan Transportation Authority (Metro) Line 246 provides north-south service from Gardena to San Pedro, with the closest bus stop on Avalon Boulevard at 213th Street in front of the Project Site.
  - Torrance Transit Line 3 provides east-west service from Redondo Beach to Long Beach, with the closest stop on Carson Street at Avalon Boulevard.
  - Torrance Transit Line R3 provides east-west express bus service from Torrance to Long Beach, with the closest stop on Carson Street at Avalon Boulevard.
- The project will provide bicycle parking spaces in each of the residences.

The City's General Plan Open Space and Environmental Conservation Element and Community Health and Environmental Justice Element identify twelve policies with specific strategies for advancing the City's clean air goals. As illustrated in Table 4, the Project is consistent with the applicable policies in the General Plan, as the Project would implement sustainability features that would reduce vehicular trips, reduce VMT, and encourage the use of alternative modes of transportation. Therefore, the Project would result in a less than significant impact related to consistency with the General Plan.

Table 4
Project Consistency with City of Carson General Plan

Policy	Project Consistency
Open Space and Environmental Conservation Element	
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.	**Not Applicable.** This policy calls for the City of Carson to coordinate with SCAQMD and other entities to reduce mobile and stationary sources of air pollution from the ports and is not applicable to development projects. Nevertheless, the Proposed Project would not inhibit such advocacy.
Policy 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.	**Not Applicable.** This policy calls for the City of Carson to coordinate with SCAQMD on policies that will help achieve clean air standards and is not applicable to development projects. Nevertheless, the Project would advance the City's objectives for creating denser and walkable neighborhoods that promote alternative transportation and reduce air quality emissions.
Policy 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.	**Consistent.** The proposed development would advance the City's objectives for creating denser and walkable neighborhoods that promote alternative transportation and reduce air quality emissions. In turn, the Project Site is well-served by public transit, including Metro Line 246 and Long Beach Transit Route 2 that provide service on Avalon Boulevard in front of the Project Site, as well as Torrance Transit Lines 3 and R3

[31] Southern California Association of Governments Data Portal https://scag.ca.gov/sites/main/files/file-attachments/0903fconnectsocal_active-transportation.pdf?1606001530,

Table 4
Project Consistency with City of Carson General Plan

Policy	Project Consistency
	that provide local and rapid bus services on Carson Street one block south of the Project Site.
Policy 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.	**Not Applicable.** This project would not include industrial and commercial uses that produce substantial mobile and stationary source missions.
Policy 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.	**Consistent.** The proposed development would reduce exposure of residences from the San Diego Freeway by including a 20-foot buffer from the property line, which is already set back from the freeway on-ramps 30 feet and 65 feet from the mainline freeway. The Project would also include a six-foot high wall that will reduce transmissions of particulates and local pollutants from the freeway. Further, the landscape plan would include a continuous line of large 24" box canopy and perimeter trees in a landscape strip.
Policy OSEC-G-22: Promote clean and alternative fuel combustion in City-owned mobile equipment and vehicles.	**Not Applicable.** This policy calls for the City of Carson to promote clean fuel technology in its vehicle fleets. Nevertheless, the Proposed Project would not inhibit such a policy and would include electric vehicle charging stations to advance the State and local goals to promote clean fuel technology.
Community Health and Environmental Justice Element	
Policy CHE-G-2: Reduce air pollution and the incidence of respiratory illness through the land use planning process.	**Not Applicable.** This policy calls for the City of Carson to use land use policy to reduce air pollution and is not applicable to development projects. Nevertheless, the Proposed Project would not inhibit such a policy.
Policy 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.	**Not Applicable.** This policy calls for the City of Carson to coordinate with SCAQMD and other entities on air pollution reduction activities and is not applicable to development projects. Nevertheless, the Proposed Project would not inhibit such advocacy.
Policy CHE-G-4: Protect community health from pollution by toxics and hazardous materials, especially in areas with vulnerable or sensitive populations.	**Not Applicable.** This policy calls for the City of Carson to use land use policy to protect community health and is not applicable to development projects. Nevertheless, the Proposed Project would not inhibit such a policy.
Policy CHE-P-5: 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.	**Not Applicable.** This policy calls for the City of Carson to use land use policy and code enforcement to protect community health and is not applicable to development projects. Nevertheless, the Proposed Project would not inhibit such a policy.
Policy CHE-G-6: Collaborate with South Coast Air Quality Management District (SCAQMD) to coordinate policies that reduce air pollution from local sources and implement	**Not Applicable.** This policy calls for the City of Carson to coordinate with SCAQMD and other entities to coordinate State, regional, and local policies and is not

Table 4
Project Consistency with City of Carson General Plan

Policy	Project Consistency
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.	applicable to development projects. Nevertheless, the Proposed Project would not inhibit such advocacy.
Policy CHE-G-8: Avoid new toxin sources by stringently evaluating the siting of facilities that might significantly increase pollution, especially near already disproportionately impacted communities.	**Not Applicable.** This project would not include industrial or other uses that emit toxins.
Source: DKA Planning, 2024.	

b. Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard?

Less Than Significant Impact.

Construction

A cumulatively considerable net increase would occur if the project's construction impacts substantially contribute to air quality violations when considering other projects that may undertake construction activities at the same time. Individual projects that generate emissions that do not exceed SCAQMD's significance thresholds would not contribute considerably to any potential cumulative impact. SCAQMD neither recommends quantified analyses of the emissions generated by a set of cumulative development projects nor provides thresholds of significance to assess the impacts associated with these emissions.[32]

Construction-related emissions were estimated using the SCAQMD's CalEEMod 2022.1.1.26 model and a projected construction schedule of at least 18 months. Table 5 summarizes the potential construction schedule that was modeled for air quality impacts.

[32] South Coast Air Quality Management District, 2003 White Paper on Potential Control Strategies to Address Cumulative Impacts from Air Pollution, https://www.aqmd.gov/docs/default-source/Agendas/Environmental-Justice/cumulative-impacts-working-group/cumulative-impacts-white-paper.pdf: "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 threshold are considered by the SCAQMD to be cumulatively considerable. This is the reason project-specific and cumulative thresholds are the same. Conversely, projects that do not exceed the project-specific thresholds are not considered to be cumulatively significant.

Table 5
Construction Schedule Assumptions

Phase	Duration	Notes
Demolition	Months 1-5	Removal of 21,775 tons of debris hauled 50 miles to landfill in 12-cubic yard capacity trucks.
Grading	Months 6-9	Approximately 31,000 cubic yards of soil imported 20 miles to site in 14-cubic yard capacity trucks.
Trenching	Months 3-7	Trenching for utilities, including gas, water, electricity, and telecommunications.
Building Construction	Months 11-18	Footings and foundation work (e.g., pouring concrete pads), framing, welding; installing mechanical, electrical, and plumbing. Floor assembly, cabinetry and carpentry, elevator installations, low voltage systems, trash management.
Paving	Months 8-9	Flatwork, including paving of driveways and walkways
Architectural Coatings	Months 11-18	Application of interior and exterior coatings and sealants.
Source: DKA Planning, 2024.		

The Project would be required to comply with the following regulations, as applicable:

- SCAQMD Rule 403, would reduce the amount of particulate matter entrained in ambient air as a result of anthropogenic fugitive dust sources by requiring actions to prevent, reduce or mitigate fugitive dust emissions.

- SCAQMD Rule 1113, which limits the VOC content of architectural coatings.

- SCAQMD Rule 402, which states that a person shall not discharge from any source whatsoever such quantities of air contaminants or other materials 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.

- In accordance with Section 2485 in Title 13 of the California Code of Regulations, the idling of all diesel-fueled commercial vehicles (with gross vehicle weight over 10,000 pounds) during construction would be limited to five minutes at any location.

- In accordance with Section 93115 in Title 17 of the California Code of Regulations, operation of any stationary, diesel-fueled, compression-ignition engines would meet specific fuel and fuel additive requirements and emissions standards.

Regional Emissions

Construction activity creates air quality impacts through the use of heavy-duty construction equipment and through vehicle trips generated by construction workers traveling to and from the Project Site. NO_X emissions would primarily result from the use of construction equipment and truck trips.

Fugitive dust emissions would peak during grading activities, where approximately 7,500 cubic yards of cut and 41,000 cubic yards of fill activities would be involved. Approximately 31,000 cubic yards of soil would be imported to the Project Site. All construction projects in the Basin must comply with SCAQMD Rule 403 for fugitive dust, which include measures to prevent visible dust plumes. Other measures include, but are not limited to, applying water and/or soil binders to uncovered areas, reestablishing ground cover as quickly as possible, utilizing a wheel washing system or other control measures to remove bulk material from tires and vehicle undercarriages before vehicles exit the Project Site, and maintaining effective cover over exposed areas. Compliance with Rule 403 would reduce regional $PM_{2.5}$ and PM_{10} emissions associated with construction activities by approximately 61 percent.

During the building finishing phase, the application of architectural coatings (e.g., paints) would release VOCs (regulated by SCAQMD Rule 1113). The assessment of construction air quality impacts considers each of these potential sources. Construction emissions can vary substantially from day to day, depending on the level of activity, the specific type of operation and, for dust, the prevailing weather conditions.

As shown in Table 6, construction of the Project would produce VOC, NO_X, CO, SO_X, PM_{10} and $PM_{2.5}$ emissions that do not exceed the SCAQMD's regional thresholds. As a result, construction of the Project would not contribute substantially to an existing violation of air quality standards for regional pollutants (e.g., ozone). This impact is considered less than significant.

Localized Emissions

In addition to maximum daily regional emissions, maximum localized (on-site) emissions were quantified for each construction activity. The localized construction air quality analysis was conducted using the methodology promulgated by the SCAQMD. Look-up tables provided by the SCAQMD were used to determine localized construction emissions thresholds for the Project.[33] LSTs represent the maximum emissions from a project that are not expected to cause or contribute to an exceedance of the most stringent applicable federal or state ambient air quality standard and are based on the most recent background ambient air quality monitoring data (2021-2023) for the Project area.

[33] South Coast Air Quality Management District, LST Methodology Appendix C-Mass Rate LST Look-Up Table, https://www.aqmd.gov/docs/default-source/ceqa/handbook/localized-significance-thresholds/appendix-c-mass-rate-lst-look-up-tables.pdf?sfvrsn=2, October 2009.

Table 6
Daily Construction Emissions

Construction Phase Year	Daily Emissions (Pounds Per Day)					
	VOC	**NO_X**	**CO**	**SO_X**	**PM_{10}**	**$PM_{2.5}$**
2025	19.6	37.7	40.9	0.1	7.9	3.0
2026	19.3	14.9	40.1	<0.1	6.1	1.7
Maximum Regional Total	19.6	37.7	40.9	0.1	7.9	3.0
Regional Threshold	75	100	550	150	150	55
Exceed Threshold?	**No**	**No**	**No**	**No**	**No**	**No**
Maximum Localized Total	15.9	29.7	28.3	0.1	4.8	2.6
Localized Threshold	N/A	123	1,530	N/A	14	8
Exceed Threshold?	**N/A**	**No**	**No**	**N/A**	**No**	**No**

The construction dates are used for the modeling of air quality emissions in the CalEEMod software. If construction activities commence later than what is assumed in the environmental analysis, the actual emissions would be lower than analyzed because of the increasing penetration of newer equipment with lower certified emission levels. Assumes implementation of SCAQMD Rule 403 (Fugitive Dust Emissions)

Source: DKA Planning, 2024 based on CalEEMod 2022.1.1.26 model runs. LST analyses based on five-acre site with 25-meter distances to receptors in South Coastal LA source receptor area. Estimates reflect the peak summer or winter season, whichever is higher. Totals may not add up due to rounding. Modeling sheets included in the Technical Appendix.

Maximum on-site daily construction emissions for NO_X, CO, PM_{10}, and $PM_{2.5}$ were calculated using CalEEMod and compared to the applicable SCAQMD LSTs for the South Coastal LA SRA based on construction site acreage that is equal to or greater than five acres. Potential impacts were evaluated at the closest off-site sensitive receptor, which are the residences 75 feet to the south of the Project Site on Garston Avenue. The closest receptor distance on the SCAQMD mass rate LST look-up tables is 25 meters.

As shown in Table 6, above**,** the Project would produce emissions that do not exceed the SCAQMD's recommended localized standards of significance for NO_2 and CO during the construction phase. Similarly, construction activities would not produce PM_{10} and $PM_{2.5}$ emissions that exceed localized thresholds recommended by the SCAQMD. These estimates assume the use of Best Available Control Measures (BACMs) that address fugitive dust emissions of PM_{10} and $PM_{2.5}$ through SCAQMD Rule 403. This would include watering portions of the site that are disturbed during grading activities and minimizing tracking of dirt onto local streets. Therefore, construction impacts on localized air quality are considered less than significant.

Operation

Operational emissions of criteria pollutants would come from area, energy, and mobile sources. Area sources include consumer products such as household cleaners, architectural coatings for routine

maintenance, and landscaping equipment.[34] Energy sources include electricity and natural gas use for space cooling and heating and water heating. The CalEEMod model generates estimates of emissions from energy use based on the land use type and size. The Project would also produce long-term air quality impacts to the region primarily from motor vehicles that access the Project Site. The Project could add approximately 2,350 vehicle trips to local roadways and the region's air quality airshed on a weekday at the start of operations in 2026.[35]

As shown in Table 7, the Project's emissions would not exceed the SCAQMD's regional or localized significance thresholds. Therefore, the operational impacts of the Project on regional and localized air quality are considered less than significant.

Table 7
Daily Operations Emissions

Emissions Source	Daily Emissions (Pounds Per Day)					
	VOC	**NO_X**	**CO**	**SO_X**	**PM_{10}**	**$PM_{2.5}$**
Area Sources	13.6	0.3	27.5	<0.1	<0.1	<0.1
Energy Sources	0.1	1.8	0.8	<0.1	0.1	0.1
Mobile Sources	9.5	10.4	126.2	<0.1	30.9	8.0
Vegetation	-<0.1	-<0.1	-<0.1	-<0.1	-<0.1	-<0.1
Regional Total	23.2	12.4	154.5	0.3	31.0	8.1
Regional Significance Threshold	55	55	550	150	150	55
Exceed Threshold?	**No**	**No**	**No**	**No**	**No**	**No**
Net Localized Total	13.7	2.1	28.3	<0.1	0.1	0.1
Localized Significance Threshold	N/A	123	1,530	N/A	4	2
Exceed Threshold?	**N/A**	**No**	**No**	**N/A**	**No**	**No**

LST analyses based on five-acre site with 25-meter distances to receptors in South Coastal LA SRA
Source: DKA Planning, 2024 based on CalEEMod 2022.1.1.26 model runs (included in the Technical Appendix). Totals reflect the summer season maximum and may not add up due to rounding.

c. Expose sensitive receptors to substantial pollutant concentrations?

Less Than Significant Impact. There are several sensitive receptors within 0.25 miles (1,320 feet) of the Project Site that could be exposed to air pollution from construction and operation of the Project, including, but are not limited to, the following representative sampling:

- Residences, Garston Avenue; 75 feet south of the Project Site.
- Bel-Aire Park mobile homes, 21425 Avalon Boulevard; 430 feet southwest of the Project Site.
- Residences, 213th Street; 720 feet west of the Project Site.
- Motel 6; 820 feet northeast of the Project Site across the San Diego Freeway

[34] In 2021, CARB adopted regulations requiring that all small (25 horsepower and below) spark-ignited off-road engines (e.g., lawn and gardening equipment) be zero emission starting in model year 2024. Standards for portable generators and large pressure washers are given until model year 2028 to be electric-powered.

[35] Carson Kott Daily & Peak Trip Generation Estimates based on ITE Trip Generation, 11th Edition; August 2024.

Construction

Construction of the Project could expose sensitive receptors to substantial pollutant concentrations if maximum daily emissions of regulated pollutants generated by sources located on and/or near the Project Site exceeded the applicable LST values presented in Table 3, or if construction activities generated significant emissions of TACs that could result in carcinogenic risks or non-carcinogenic hazards exceeding the SCAQMD Air Quality Significance Thresholds of ten excess cancers per million or non-carcinogenic Hazard Index greater than 1.0, respectively. As discussed above, the LST values were derived by the SCAQMD for the criteria pollutants NO_X, CO, PM_{10}, and $PM_{2.5}$ to prevent the occurrence of concentrations exceeding the air quality standards at sensitive receptor locations based on proximity and construction site size.

As shown in Table 6, during construction of the Project, maximum daily localized unmitigated emissions of NO_2, CO, PM_{10}, and $PM_{2.5}$ from sources on the Project Site would remain below each of the respective LST values. Unmitigated maximum daily localized emissions would not exceed any of the localized standards for receptors that are within 25 meters of the Project's construction activities. Therefore, based on SCAQMD guidance, localized emissions of criteria pollutants would not have the potential to expose sensitive receptors to substantial concentrations that would present a public health concern.

The primary TAC that would be generated by construction activities is diesel PM, which would be released from the exhaust of mobile construction equipment. The construction emissions modeling conservatively assumed that all equipment present on the Project Site would be operating simultaneously throughout most of the day, though this would rarely be the case. Daily emissions of diesel PM would be negligible throughout the course of Project construction. Therefore, the magnitude of daily diesel PM emissions, would not be sufficient to result in substantial pollutant concentrations at off-site locations nearby.

Furthermore, according to SCAQMD methodology, health risks from carcinogenic air toxics are usually described in terms of individual cancer risk. "Individual Cancer Risk" is the likelihood that a person exposed to concentrations of TACs over a 30-year period will contract cancer based on the use of standard risk-assessment methodology. The entire duration of construction activities associated with implementation of the Project is anticipated to be approximately 18 months, and the magnitude of diesel PM emissions will vary over this time period. No residual emissions and corresponding individual cancer risk are anticipated after construction. Because there is such a short-term exposure period, construction TAC emissions would result in a less than significant impact. Therefore, construction of the Project would not expose sensitive receptors to substantial diesel PM concentrations, and this impact would be less than significant.

Operation

The Project Site would be redeveloped with multi-family residences, a land use that is not typically associated with TAC emissions. Typical sources of acutely and chronically hazardous TACs include industrial manufacturing processes (e.g., chrome plating, electrical manufacturing, petroleum refinery). The Project would not include these types of potential industrial manufacturing process sources. It is expected that quantities of hazardous TACs generated on-site (e.g., cleaning solvents, paints, landscape pesticides) for the types of proposed land uses would be below thresholds warranting further study under California Accidental Release Program.

When considering potential air quality impacts under CEQA, consideration is given to the location of sensitive receptors within close proximity of land uses that emit TACs. CARB has published and adopted the Air Quality and Land Use Handbook: A Community Health Perspective, which provides recommendations regarding the siting of new sensitive land uses near potential sources of air toxic emissions (e.g., freeways, distribution centers, rail yards, ports, refineries, chrome plating facilities, dry cleaners, and gasoline dispensing facilities).[36] The SCAQMD adopted similar recommendations in its Guidance Document for Addressing Air Quality Issues in General Plans and Local Planning.[37] Together, CARB and SCAQMD guidelines recommend siting distances for both the development of sensitive land uses in proximity to TAC sources and the addition of new TAC sources in proximity to existing sensitive land uses.

The primary sources of potential air toxics associated with Project operations include DPM from delivery trucks (e.g., truck traffic on local streets and idling on adjacent streets). However, these activities, and the land uses associated with the Project, are not considered land uses that generate substantial TAC emissions. It should be noted that the SCAQMD recommends that health risk assessments (HRAs) be conducted for substantial individual sources of DPM (e.g., truck stops and warehouse distribution facilities that generate more than 100 trucks per day or more than 40 trucks with operating transport refrigeration units) and has provided guidance for analyzing mobile source diesel emissions.[38] Based on this guidance, the Project would not include these types of land uses and is not considered to be a substantial source of DPM warranting a refined HRA since daily truck trips to the Project Site would not exceed 100 trucks per day or more than 40 trucks with operating transport refrigeration units. In addition, CARB-mandated airborne toxic control measures (ATCM) limits diesel-fueled commercial vehicles (delivery trucks) to idle for no more than five minutes at any given time, which would further limit diesel particulate emissions.

As the Project would not contain substantial TAC sources and is consistent with the CARB and SCAQMD guidelines, the Project would not result in the exposure of off-site sensitive receptors to carcinogenic or toxic air contaminants that exceed the maximum incremental cancer risk of ten in one million or an acute or chronic hazard index of 1.0, and potential TAC impacts would be less than significant.

The Project would generate long-term emissions on-site from area and energy sources that would generate negligible pollutant concentrations of CO, NO_2, $PM_{2.5}$, or PM_{10} at nearby sensitive receptors. While long-term operations of the Project would add traffic to local roads that produces off-site emissions, these would not result in exceedances of CO air quality standards at roadways in the area due to three key factors. First, CO hotspots are extremely rare and only occur in the presence of unusual atmospheric conditions and extremely cold conditions, neither of which applies to this Project area. Second, auto-related emissions of CO continue to decline because of advances in fuel combustion technology in the vehicle fleet. Finally, the Project would not contribute to the levels of congestion that would be needed to produce emissions concentrations needed to trigger a CO hotspot, as it would add up to 2,350 vehicle trips to the local roadway network on weekdays when the development could be

[36] California Air Resources Board, Air Quality and Land Use Handbook, a Community Health Perspective, April 2005.

[37] South Coast Air Quality Management District, Guidance Document for Addressing Air Quality Issues in General Plans and Local Planning, May 6, 2005.

[38] South Coast Air Quality Management District, Health Risk Assessment Guidance for Analyzing Cancer Risks from Mobile Source Diesel Idling Emissions for CEQA Air Quality Analysis, 2002.

operational in 2026.[39] The majority of vehicle-related impacts at the Project Site would come from 158 and 185 vehicles entering and exiting the development during the peak A.M. and P.M. hours, respectively.[40] This would represent a small addition to traffic volumes on local roadways. For example, it would represent 7.9 percent of the 29,718 average daily vehicles that used Avalon Boulevard at Carson Street in 2018.[41] Even with the contribution of the Project's traffic, this intersection would carry 32,068 daily vehicle trips, well below the traffic volumes that would be needed to generate CO exceedances of the ambient air quality standard.[42]

Finally, the Project would not result in any substantial emissions of TACs during the construction or operations phase. During the construction phase, the primary air quality impacts would be associated with the combustion of diesel fuels, which produce exhaust-related particulate matter that is considered a toxic air contaminant by CARB based on chronic exposure to these emissions.[43] However, construction activities would not produce chronic, long-term exposure to diesel particulate matter. During long-term project operations, the Project does not include typical sources of acutely and chronically hazardous TACs such as industrial manufacturing processes and automotive repair facilities. As a result, the Project would not create substantial concentrations of TACs.

In addition, the SCAQMD recommends that health risk assessments be conducted for substantial sources of diesel particulate emissions (e.g., truck stops and warehouse distribution facilities) and has provided guidance for analyzing mobile source diesel emissions.[44] The Project would not generate a substantial number of truck trips. Based on the limited activity of TAC sources, the Project would not warrant the need for a health risk assessment associated with on-site activities. Therefore, the Project's operational impacts on local sensitive receptors would be less than significant.

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

Less Than Significant Impact. The Project would not result in activities that create objectionable odors. The Project is a housing development that would not include any activities typically associated with unpleasant odors and local nuisances (e.g., rendering facilities, dry cleaners). SCAQMD regulations that govern nuisances (i.e., Rule 402, Nuisances) would regulate any intermittent odors associated with residences. As a result, any odor impacts from the Project would be considered less than significant.

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39 Carson Kott Daily & Peak Trip Generation Estimates based on ITE Trip Generation, 11th Edition; August 2024.

40 Ibid

41 City of Carson Traffic Count Map, 2018; https://ci.carson.ca.us/content/files/pdfs/BusinessDev/demographics/Traffic_Count_Map.pdf .

42 South Coast Air Quality Management District; 2003 AQMP. As discussed in the 2003 AQMP, the 1992 CO Plan included a CO hotspot analysis at four intersections in the peak A.M. and P.M. time periods, including Long Beach Boulevard and Imperial Highway (Lynwood), Wilshire Boulevard and Veteran Avenue (Westwood), Sunset Boulevard and Highland Avenue (Hollywood), and La Cienega Boulevard and Century Boulevard (Inglewood). The busiest intersection was Wilshire and Veteran, used by 100,000 vehicles per day. The 2003 AQMP estimated a 4.6 ppm one-hour concentration at this intersection, which meant that an exceedance (20 ppm) would not occur until daily traffic exceeded more than 400,000 vehicles per day.

43 California Office of Environmental Health Hazard Assessment. Health Effects of Diesel Exhaust. www. http://oehha.ca.gov/public_info/facts/dieselfacts.html

44 South Coast Air Quality Management District, Health Risk Assessment Guidance for Analyzing Cancer Risks from Mobile Source Diesel Emissions, December 2002.

TECHNICAL APPENDIX



DouglasKim+Associates,LLC

FUTURE EMISSIONS

21212 Avalon Boulevard (Future) Detailed Report

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1. Basic Project Information

1.1. Basic Project Information

Data Field	Value
Project Name	21212 Avalon Boulevard (Future)
Construction Start Date	1/1/2025
Operational Year	2026
Lead Agency	City of Carson
Land Use Scale	Project/site
Analysis Level for Defaults	County
Windspeed (m/s)	3.50
Precipitation (days)	17.4
Location	21212 Avalon Blvd, Carson, CA 90745, USA
County	Los Angeles-South Coast
City	Carson
Air District	South Coast AQMD
Air Basin	South Coast
TAZ	4617
EDFZ	7
Electric Utility	Southern California Edison
Gas Utility	Southern California Gas
App Version	2022.1.1.26

1.2. Land Use Types

Land Use Subtype	Size	Unit	Lot Acreage	Building Area (sq ft)	Landscape Area (sq ft)	Special Landscape Area (sq ft)	Population	Description
Apartments Low Rise	29.0	Dwelling Unit	2.00	14,384	0.00	—	100	—

Condo/Townhouse	283	Dwelling Unit	9.00	434,321	127,420	—	971	—
Enclosed Parking Structure	566	Space	2.07	226,400	0.00	—	—	—
Parking Lot	92.0	Space	1.00	0.00	0.00	—	—	—

1.3. User-Selected Emission Reduction Measures by Emissions Sector

No measures selected

2. Emissions Summary

2.1. Construction Emissions Compared Against Thresholds

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Un/Mit.	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—
Unmit.	19.3	37.7	40.9	0.11	1.59	6.78	7.89	1.46	1.55	3.01
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—
Unmit.	19.6	36.1	38.1	0.11	1.11	6.78	7.89	1.04	1.40	2.44
Average Daily (Max)	—	—	—	—	—	—	—	—	—	—
Unmit.	6.84	18.6	19.4	0.05	0.66	3.21	3.88	0.61	0.85	1.46
Annual (Max)	—	—	—	—	—	—	—	—	—	—
Unmit.	1.25	3.40	3.55	0.01	0.12	0.59	0.71	0.11	0.16	0.27

2.2. Construction Emissions by Year, Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Year	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T
Daily - Summer (Max)	—	—	—	—	—	—	—	—	—	—

2025	4.34	37.7	40.9	0.11	1.59	6.78	7.89	1.46	1.55	3.01
2026	19.3	14.6	40.1	0.04	0.43	5.62	6.05	0.39	1.34	1.73
Daily - Winter (Max)	—	—	—	—	—	—	—	—	—	—
2025	19.6	36.1	38.1	0.11	1.11	6.78	7.89	1.04	1.40	2.44
2026	19.3	14.9	36.4	0.04	0.43	5.62	6.05	0.39	1.34	1.73
Average Daily	—	—	—	—	—	—	—	—	—	—
2025	3.91	18.6	19.4	0.05	0.66	3.21	3.88	0.61	0.85	1.46
2026	6.84	5.34	13.3	0.01	0.15	1.97	2.12	0.14	0.47	0.61
Annual	—	—	—	—	—	—	—	—	—	—
2025	0.71	3.40	3.55	0.01	0.12	0.59	0.71	0.11	0.16	0.27
2026	1.25	0.97	2.42	< 0.005	0.03	0.36	0.39	0.02	0.09	0.11

2.4. Operations Emissions Compared Against Thresholds

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Un/Mit.	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—
Unmit.	23.2	12.4	154	0.34	0.37	30.7	31.0	0.35	7.79	8.14
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—
Unmit.	19.9	13.2	113	0.33	0.34	30.7	31.0	0.33	7.79	8.12
Average Daily (Max)	—	—	—	—	—	—	—	—	—	—
Unmit.	22.1	13.5	136	0.33	0.36	30.3	30.7	0.35	7.70	8.05
Annual (Max)	—	—	—	—	—	—	—	—	—	—
Unmit.	4.02	2.47	24.8	0.06	0.07	5.53	5.60	0.06	1.41	1.47

2.5. Operations Emissions by Sector, Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Sector	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—
Mobile	9.53	10.4	126	0.33	0.20	30.7	30.9	0.19	7.79	7.98
Area	13.6	0.25	27.5	< 0.005	0.03	—	0.03	0.02	—	0.02
Energy	0.11	1.84	0.78	0.01	0.15	—	0.15	0.15	—	0.15
Water	—	—	—	—	—	—	—	—	—	—
Waste	—	—	—	—	—	—	—	—	—	—
Refrig.	—	—	—	—	—	—	—	—	—	—
Vegetation	-0.01	-0.02	—	< 0.005	-0.01	-0.01	-0.02	> -0.005	> -0.005	> -0.005
Total	23.2	12.4	154	0.34	0.37	30.7	31.0	0.35	7.79	8.14
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—
Mobile	9.42	11.4	112	0.31	0.20	30.7	30.9	0.19	7.79	7.98
Area	10.4	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00
Energy	0.11	1.84	0.78	0.01	0.15	—	0.15	0.15	—	0.15
Water	—	—	—	—	—	—	—	—	—	—
Waste	—	—	—	—	—	—	—	—	—	—
Refrig.	—	—	—	—	—	—	—	—	—	—
Vegetation	-0.01	-0.02	—	< 0.005	-0.01	-0.01	-0.02	> -0.005	> -0.005	> -0.005
Total	19.9	13.2	113	0.33	0.34	30.7	31.0	0.33	7.79	8.12
Average Daily	—	—	—	—	—	—	—	—	—	—
Mobile	9.37	11.5	116	0.32	0.20	30.3	30.5	0.19	7.70	7.89
Area	12.6	0.17	18.9	< 0.005	0.02	—	0.02	0.01	—	0.01
Energy	0.11	1.84	0.78	0.01	0.15	—	0.15	0.15	—	0.15
Water	—	—	—	—	—	—	—	—	—	—
Waste	—	—	—	—	—	—	—	—	—	—
Refrig.	—	—	—	—	—	—	—	—	—	—

Vegetation	-0.01	-0.02	—	< 0.005	-0.01	-0.01	-0.02	> -0.005	> -0.005	> -0.005
Total	22.1	13.5	136	0.33	0.36	30.3	30.7	0.35	7.70	8.05
Annual	—	—	—	—	—	—	—	—	—	—
Mobile	1.71	2.11	21.2	0.06	0.04	5.53	5.57	0.03	1.41	1.44
Area	2.30	0.03	3.44	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005
Energy	0.02	0.34	0.14	< 0.005	0.03	—	0.03	0.03	—	0.03
Water	—	—	—	—	—	—	—	—	—	—
Waste	—	—	—	—	—	—	—	—	—	—
Refrig.	—	—	—	—	—	—	—	—	—	—
Vegetation	> -0.005	> -0.005	—	< 0.005	> -0.005	> -0.005	> -0.005	> -0.005	> -0.005	> -0.005
Total	4.02	2.47	24.8	0.06	0.07	5.53	5.60	0.06	1.41	1.47

3. Construction Emissions Details

3.1. Demolition (2025) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T
Onsite	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	2.40	22.2	19.9	0.03	0.92	—	0.92	0.84	—	0.84
Demolition	—	—	—	—	—	3.61	3.61	—	0.55	0.55
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	2.40	22.2	19.9	0.03	0.92	—	0.92	0.84	—	0.84
Demolition	—	—	—	—	—	3.61	3.61	—	0.55	0.55

Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.56	5.23	4.69	0.01	0.22	—	0.22	0.20	—	0.20
Demolition	—	—	—	—	—	0.85	0.85	—	0.13	0.13
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.10	0.95	0.86	< 0.005	0.04	—	0.04	0.04	—	0.04
Demolition	—	—	—	—	—	0.16	0.16	—	0.02	0.02
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—
Worker	0.06	0.06	1.04	0.00	0.00	0.20	0.20	0.00	0.05	0.05
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.11	12.1	4.23	0.07	0.14	2.93	3.07	0.14	0.80	0.94
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—
Worker	0.06	0.07	0.88	0.00	0.00	0.20	0.20	0.00	0.05	0.05
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.11	12.6	4.25	0.07	0.14	2.93	3.07	0.14	0.80	0.94
Average Daily	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.02	0.22	0.00	0.00	0.05	0.05	0.00	0.01	0.01
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.03	3.01	1.00	0.02	0.03	0.69	0.72	0.03	0.19	0.22
Annual	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.04	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	< 0.005	0.55	0.18	< 0.005	0.01	0.13	0.13	0.01	0.03	0.04

3.3. Grading (2025) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T
Onsite	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	3.20	29.7	28.3	0.06	1.23	—	1.23	1.14	—	1.14
Dust From Material Movement	—	—	—	—	—	3.59	3.59	—	1.43	1.43
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.76	7.07	6.75	0.01	0.29	—	0.29	0.27	—	0.27
Dust From Material Movement	—	—	—	—	—	0.86	0.86	—	0.34	0.34
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.14	1.29	1.23	< 0.005	0.05	—	0.05	0.05	—	0.05
Dust From Material Movement	—	—	—	—	—	0.16	0.16	—	0.06	0.06
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—
Worker	0.09	0.09	1.39	0.00	0.00	0.26	0.26	0.00	0.06	0.06

Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	< 0.005	0.37	0.14	< 0.005	< 0.005	0.08	0.08	< 0.005	0.02	0.03
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—
Worker	0.02	0.02	0.30	0.00	0.00	0.06	0.06	0.00	0.01	0.01
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	< 0.005	0.09	0.03	< 0.005	< 0.005	0.02	0.02	< 0.005	0.01	0.01
Annual	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.05	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	< 0.005	0.02	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005

3.5. Building Construction (2025) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T
Onsite	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.13	10.4	13.0	0.02	0.43	—	0.43	0.40	—	0.40
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.13	1.25	1.56	< 0.005	0.05	—	0.05	0.05	—	0.05
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—

Off-Road Equipment	0.02	0.23	0.28	< 0.005	0.01	—	0.01	0.01	—	0.01
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—
Worker	1.36	1.54	18.9	0.00	0.00	4.18	4.18	0.00	0.98	0.98
Vendor	0.06	2.65	1.26	0.02	0.03	0.60	0.63	0.02	0.17	0.18
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—
Worker	0.16	0.20	2.36	0.00	0.00	0.49	0.49	0.00	0.12	0.12
Vendor	0.01	0.32	0.15	< 0.005	< 0.005	0.07	0.08	< 0.005	0.02	0.02
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—
Worker	0.03	0.04	0.43	0.00	0.00	0.09	0.09	0.00	0.02	0.02
Vendor	< 0.005	0.06	0.03	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

3.7. Building Construction (2026) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T
Onsite	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.07	9.85	13.0	0.02	0.38	—	0.38	0.35	—	0.35
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.07	9.85	13.0	0.02	0.38	—	0.38	0.35	—	0.35
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.38	3.49	4.59	0.01	0.13	—	0.13	0.12	—	0.12
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.07	0.64	0.84	< 0.005	0.02	—	0.02	0.02	—	0.02
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—
Worker	1.18	1.24	20.6	0.00	0.00	4.18	4.18	0.00	0.98	0.98
Vendor	0.07	2.42	1.17	0.02	0.03	0.60	0.63	0.02	0.17	0.18
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—
Worker	1.17	1.39	17.6	0.00	0.00	4.18	4.18	0.00	0.98	0.98
Vendor	0.06	2.53	1.20	0.02	0.03	0.60	0.63	0.02	0.17	0.18
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—
Worker	0.41	0.54	6.53	0.00	0.00	1.46	1.46	0.00	0.34	0.34
Vendor	0.02	0.90	0.42	0.01	0.01	0.21	0.22	0.01	0.06	0.06
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—
Worker	0.08	0.10	1.19	0.00	0.00	0.27	0.27	0.00	0.06	0.06
Vendor	< 0.005	0.16	0.08	< 0.005	< 0.005	0.04	0.04	< 0.005	0.01	0.01

Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

3.9. Paving (2025) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T
Onsite	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.80	7.45	9.98	0.01	0.35	—	0.35	0.32	—	0.32
Paving	0.19	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.09	0.88	1.18	< 0.005	0.04	—	0.04	0.04	—	0.04
Paving	0.02	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.02	0.16	0.21	< 0.005	0.01	—	0.01	0.01	—	0.01
Paving	< 0.005	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—
Worker	0.06	0.06	1.04	0.00	0.00	0.20	0.20	0.00	0.05	0.05
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.11	0.00	0.00	0.02	0.02	0.00	0.01	0.01
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.02	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

3.11. Architectural Coating (2025) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T
Onsite	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.13	0.88	1.14	< 0.005	0.03	—	0.03	0.03	—	0.03
Architectural Coatings	16.7	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.02	0.11	0.14	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005
Architectural Coatings	1.99	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—

Off-Road Equipment	< 0.005	0.02	0.02	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005
Architectural Coatings	0.36	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—
Worker	0.27	0.31	3.77	0.00	0.00	0.84	0.84	0.00	0.20	0.20
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—
Worker	0.03	0.04	0.47	0.00	0.00	0.10	0.10	0.00	0.02	0.02
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.09	0.00	0.00	0.02	0.02	0.00	< 0.005	< 0.005
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

3.13. Architectural Coating (2026) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T
Onsite	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.12	0.86	1.13	< 0.005	0.02	—	0.02	0.02	—	0.02

Architectural Coatings	16.7	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.12	0.86	1.13	< 0.005	0.02	—	0.02	0.02	—	0.02
Architectural Coatings	16.7	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.04	0.30	0.40	< 0.005	0.01	—	0.01	0.01	—	0.01
Architectural Coatings	5.90	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.06	0.07	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005
Architectural Coatings	1.08	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—
Worker	0.24	0.25	4.13	0.00	0.00	0.84	0.84	0.00	0.20	0.20
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—
Worker	0.23	0.28	3.52	0.00	0.00	0.84	0.84	0.00	0.20	0.20
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—
Worker	0.08	0.11	1.31	0.00	0.00	0.29	0.29	0.00	0.07	0.07
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—
Worker	0.02	0.02	0.24	0.00	0.00	0.05	0.05	0.00	0.01	0.01
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

3.15. Trenching (2025) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T
Onsite	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.19	1.29	1.45	< 0.005	0.06	—	0.06	0.05	—	0.05
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.19	1.29	1.45	< 0.005	0.06	—	0.06	0.05	—	0.05
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.06	0.38	0.43	< 0.005	0.02	—	0.02	0.02	—	0.02
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—

Off-Road Equipment	0.01	0.07	0.08	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.17	0.00	0.00	0.03	0.03	0.00	0.01	0.01
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.15	0.00	0.00	0.03	0.03	0.00	0.01	0.01
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.05	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

4. Operations Emissions Details

4.1. Mobile Emissions by Land Use

4.1.1. Unmitigated

Mobile source emissions results are presented in Sections 2.6. No further detailed breakdown of emissions is available.

4.2. Energy

4.2.1. Electricity Emissions By Land Use - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—
Apartments Low Rise	—	—	—	—	—	—	—	—	—	—
Condo/Townhouse	—	—	—	—	—	—	—	—	—	—
Enclosed Parking Structure	—	—	—	—	—	—	—	—	—	—
Parking Lot	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—
Apartments Low Rise	—	—	—	—	—	—	—	—	—	—
Condo/Townhouse	—	—	—	—	—	—	—	—	—	—
Enclosed Parking Structure	—	—	—	—	—	—	—	—	—	—
Parking Lot	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—
Apartments Low Rise	—	—	—	—	—	—	—	—	—	—
Condo/Townhouse	—	—	—	—	—	—	—	—	—	—

Enclosed Parking Structure	—	—	—	—	—	—	—	—	—	—
Parking Lot	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—

4.2.3. Natural Gas Emissions By Land Use - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—
Apartments Low Rise	0.01	0.12	0.05	< 0.005	0.01	—	0.01	0.01	—	0.01
Condo/Townhouse	0.10	1.72	0.73	0.01	0.14	—	0.14	0.14	—	0.14
Enclosed Parking Structure	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00
Parking Lot	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00
Total	0.11	1.84	0.78	0.01	0.15	—	0.15	0.15	—	0.15
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—
Apartments Low Rise	0.01	0.12	0.05	< 0.005	0.01	—	0.01	0.01	—	0.01
Condo/Townhouse	0.10	1.72	0.73	0.01	0.14	—	0.14	0.14	—	0.14
Enclosed Parking Structure	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00
Parking Lot	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00
Total	0.11	1.84	0.78	0.01	0.15	—	0.15	0.15	—	0.15
Annual	—	—	—	—	—	—	—	—	—	—

Apartments Low Rise	< 0.005	0.02	0.01	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005
Condo/Townhouse	0.02	0.31	0.13	< 0.005	0.03	—	0.03	0.03	—	0.03
Enclosed Parking Structure	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00
Parking Lot	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00
Total	0.02	0.34	0.14	< 0.005	0.03	—	0.03	0.03	—	0.03

4.3. Area Emissions by Source

4.3.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Source	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—
Hearths	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00
Consumer Products	9.61	—	—	—	—	—	—	—	—	—
Architectural Coatings	0.79	—	—	—	—	—	—	—	—	—
Landscape Equipment	3.19	0.25	27.5	< 0.005	0.03	—	0.03	0.02	—	0.02
Total	13.6	0.25	27.5	< 0.005	0.03	—	0.03	0.02	—	0.02
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—
Hearths	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00
Consumer Products	9.61	—	—	—	—	—	—	—	—	—
Architectural Coatings	0.79	—	—	—	—	—	—	—	—	—

Total	10.4	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00
Annual	—	—	—	—	—	—	—	—	—	—
Hearths	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00
Consumer Products	1.75	—	—	—	—	—	—	—	—	—
Architectural Coatings	0.14	—	—	—	—	—	—	—	—	—
Landscape Equipment	0.40	0.03	3.44	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005
Total	2.30	0.03	3.44	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005

4.4. Water Emissions by Land Use

4.4.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—
Apartments Low Rise	—	—	—	—	—	—	—	—	—	—
Condo/Townhouse	—	—	—	—	—	—	—	—	—	—
Enclosed Parking Structure	—	—	—	—	—	—	—	—	—	—
Parking Lot	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—
Apartments Low Rise	—	—	—	—	—	—	—	—	—	—

Condo/Townhouse	—	—	—	—	—	—	—	—	—	—
Enclosed Parking Structure	—	—	—	—	—	—	—	—	—	—
Parking Lot	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—
Apartments Low Rise	—	—	—	—	—	—	—	—	—	—
Condo/Townhouse	—	—	—	—	—	—	—	—	—	—
Enclosed Parking Structure	—	—	—	—	—	—	—	—	—	—
Parking Lot	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—

4.5. Waste Emissions by Land Use

4.5.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—
Apartments Low Rise	—	—	—	—	—	—	—	—	—	—
Condo/Townhouse	—	—	—	—	—	—	—	—	—	—
Enclosed Parking Structure	—	—	—	—	—	—	—	—	—	—
Parking Lot	—	—	—	—	—	—	—	—	—	—

Total	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—
Apartments Low Rise	—	—	—	—	—	—	—	—	—	—
Condo/Townhouse	—	—	—	—	—	—	—	—	—	—
Enclosed Parking Structure	—	—	—	—	—	—	—	—	—	—
Parking Lot	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—
Apartments Low Rise	—	—	—	—	—	—	—	—	—	—
Condo/Townhouse	—	—	—	—	—	—	—	—	—	—
Enclosed Parking Structure	—	—	—	—	—	—	—	—	—	—
Parking Lot	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—

4.6. Refrigerant Emissions by Land Use

4.6.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—
Apartments Low Rise	—	—	—	—	—	—	—	—	—	—

Condo/Townho	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—
Apartments Low Rise	—	—	—	—	—	—	—	—	—	—
Condo/Townho use	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—
Apartments Low Rise	—	—	—	—	—	—	—	—	—	—
Condo/Townho use	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—

4.7. Offroad Emissions By Equipment Type

4.7.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Equipment Type	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—

4.8. Stationary Emissions By Equipment Type

4.8.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Equipment Type	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—

4.9. User Defined Emissions By Equipment Type

4.9.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Equipment Type	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—

4.10. Soil Carbon Accumulation By Vegetation Type

4.10.1. Soil Carbon Accumulation By Vegetation Type - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Vegetation	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—

4.10.2. Above and Belowground Carbon Accumulation by Land Use Type - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—

4.10.3. Avoided and Sequestered Emissions by Species - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Species	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—

Avoided	—	—	—	—	—	—	—	—	—	—
Olive	> -0.005	> -0.005	—	> -0.005	> -0.005	> -0.005	> -0.005	> -0.005	> -0.005	> -0.005
Chinese Pistache	> -0.005	> -0.005	—	> -0.005	> -0.005	> -0.005	> -0.005	> -0.005	> -0.005	> -0.005
Sycamore	> -0.005	< 0.005	—	< 0.005	> -0.005	> -0.005	> -0.005	> -0.005	> -0.005	> -0.005
Quercus Acutifolia	> -0.005	< 0.005	—	< 0.005	> -0.005	> -0.005	> -0.005	> -0.005	> -0.005	> -0.005
Coastal Live Oak	> -0.005	< 0.005	—	< 0.005	> -0.005	> -0.005	> -0.005	> -0.005	> -0.005	> -0.005
Chinese Elm	> -0.005	< 0.005	—	< 0.005	> -0.005	> -0.005	> -0.005	> -0.005	> -0.005	> -0.005
Fern Tree	> -0.005	> -0.005	—	> -0.005	> -0.005	> -0.005	> -0.005	> -0.005	> -0.005	> -0.005
Tristania	> -0.005	< 0.005	—	< 0.005	> -0.005	> -0.005	> -0.005	> -0.005	> -0.005	> -0.005
Ulmus	> -0.005	> -0.005	—	> -0.005	> -0.005	> -0.005	> -0.005	> -0.005	> -0.005	> -0.005
Strawberry Tree	> -0.005	> -0.005	—	> -0.005	> -0.005	> -0.005	> -0.005	> -0.005	> -0.005	> -0.005
Magnolia	> -0.005	< 0.005	—	< 0.005	> -0.005	> -0.005	> -0.005	> -0.005	> -0.005	> -0.005
Wilga	< 0.005	< 0.005	—	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005
Guava Crape Myrtle	> -0.005	< 0.005	—	< 0.005	> -0.005	> -0.005	> -0.005	> -0.005	> -0.005	> -0.005
Date Palm	> -0.005	< 0.005	—	< 0.005	> -0.005	> -0.005	> -0.005	> -0.005	> -0.005	> -0.005
Bay	> -0.005	> -0.005	—	> -0.005	> -0.005	> -0.005	> -0.005	> -0.005	> -0.005	> -0.005
African Sumac	> -0.005	< 0.005	—	< 0.005	> -0.005	> -0.005	> -0.005	> -0.005	> -0.005	> -0.005
Subtotal	-0.01	< 0.005	—	< 0.005	-0.01	-0.01	-0.01	> -0.005	> -0.005	> -0.005
Sequestered	—	—	—	—	—	—	—	—	—	—
Olive	—	—	—	—	—	—	—	—	—	—
Chinese Pistache	—	—	—	—	—	—	—	—	—	—
Sycamore	—	—	—	—	—	—	—	—	—	—
Quercus Acutifolia	—	—	—	—	—	—	—	—	—	—
Coastal Live Oak	—	—	—	—	—	—	—	—	—	—

Chinese Elm	—	—	—	—	—	—	—	—	—	—
Fern Tree	—	—	—	—	—	—	—	—	—	—
Tristania	—	—	—	—	—	—	—	—	—	—
Ulmus	—	—	—	—	—	—	—	—	—	—
Strawberry Tree	—	—	—	—	—	—	—	—	—	—
Magnolia	—	—	—	—	—	—	—	—	—	—
Wilga	—	—	—	—	—	—	—	—	—	—
Guava Crape Myrtle	—	—	—	—	—	—	—	—	—	—
Date Palm	—	—	—	—	—	—	—	—	—	—
Bay	—	—	—	—	—	—	—	—	—	—
African Sumac	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—
Olive	—	> -0.005	—	> -0.005	> -0.005	> -0.005	> -0.005	> -0.005	> -0.005	> -0.005
Chinese Pistache	—	> -0.005	—	> -0.005	> -0.005	> -0.005	> -0.005	> -0.005	> -0.005	> -0.005
Sycamore	—	> -0.005	—	> -0.005	> -0.005	> -0.005	> -0.005	> -0.005	> -0.005	> -0.005
Quercus Acutifolia	—	> -0.005	—	> -0.005	> -0.005	> -0.005	> -0.005	> -0.005	> -0.005	> -0.005
Coastal Live Oak	—	> -0.005	—	> -0.005	> -0.005	> -0.005	> -0.005	> -0.005	> -0.005	> -0.005
Chinese Elm	—	> -0.005	—	> -0.005	> -0.005	> -0.005	> -0.005	> -0.005	> -0.005	> -0.005
Fern Tree	—	> -0.005	—	> -0.005	> -0.005	> -0.005	> -0.005	> -0.005	> -0.005	> -0.005
Tristania	—	> -0.005	—	> -0.005	> -0.005	> -0.005	> -0.005	> -0.005	> -0.005	> -0.005
Ulmus	—	> -0.005	—	> -0.005	> -0.005	> -0.005	> -0.005	> -0.005	> -0.005	> -0.005
Strawberry Tree	—	> -0.005	—	> -0.005	> -0.005	> -0.005	> -0.005	> -0.005	> -0.005	> -0.005
Magnolia	—	> -0.005	—	> -0.005	> -0.005	> -0.005	> -0.005	> -0.005	> -0.005	> -0.005
Wilga	—	> -0.005	—	> -0.005	> -0.005	> -0.005	> -0.005	> -0.005	> -0.005	> -0.005

Guava Crape Myrtle	—	> -0.005	—	> -0.005	> -0.005	> -0.005	> -0.005	> -0.005	> -0.005	> -0.005
Date Palm	—	> -0.005	—	> -0.005	> -0.005	> -0.005	> -0.005	> -0.005	> -0.005	> -0.005
Bay	—	> -0.005	—	> -0.005	> -0.005	> -0.005	> -0.005	> -0.005	> -0.005	> -0.005
African Sumac	—	> -0.005	—	> -0.005	> -0.005	> -0.005	> -0.005	> -0.005	> -0.005	> -0.005
Subtotal	—	-0.02	—	> -0.005	> -0.005	> -0.005	> -0.005	> -0.005	> -0.005	> -0.005
—	—	—	—	—	—	—	—	—	—	—
Total	-0.01	-0.02	—	< 0.005	-0.01	-0.01	-0.02	> -0.005	> -0.005	> -0.005
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—
Olive	> -0.005	> -0.005	—	> -0.005	> -0.005	> -0.005	> -0.005	> -0.005	> -0.005	> -0.005
Chinese Pistache	> -0.005	> -0.005	—	> -0.005	> -0.005	> -0.005	> -0.005	> -0.005	> -0.005	> -0.005
Sycamore	> -0.005	< 0.005	—	< 0.005	> -0.005	> -0.005	> -0.005	> -0.005	> -0.005	> -0.005
Quercus Acutifolia	> -0.005	< 0.005	—	< 0.005	> -0.005	> -0.005	> -0.005	> -0.005	> -0.005	> -0.005
Coastal Live Oak	> -0.005	< 0.005	—	< 0.005	> -0.005	> -0.005	> -0.005	> -0.005	> -0.005	> -0.005
Chinese Elm	> -0.005	< 0.005	—	< 0.005	> -0.005	> -0.005	> -0.005	> -0.005	> -0.005	> -0.005
Fern Tree	> -0.005	> -0.005	—	> -0.005	> -0.005	> -0.005	> -0.005	> -0.005	> -0.005	> -0.005
Tristania	> -0.005	< 0.005	—	< 0.005	> -0.005	> -0.005	> -0.005	> -0.005	> -0.005	> -0.005
Ulmus	> -0.005	> -0.005	—	> -0.005	> -0.005	> -0.005	> -0.005	> -0.005	> -0.005	> -0.005
Strawberry Tree	> -0.005	> -0.005	—	> -0.005	> -0.005	> -0.005	> -0.005	> -0.005	> -0.005	> -0.005
Magnolia	> -0.005	< 0.005	—	< 0.005	> -0.005	> -0.005	> -0.005	> -0.005	> -0.005	> -0.005
Wilga	< 0.005	< 0.005	—	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005
Guava Crape Myrtle	> -0.005	< 0.005	—	< 0.005	> -0.005	> -0.005	> -0.005	> -0.005	> -0.005	> -0.005
Date Palm	> -0.005	< 0.005	—	< 0.005	> -0.005	> -0.005	> -0.005	> -0.005	> -0.005	> -0.005
Bay	> -0.005	> -0.005	—	> -0.005	> -0.005	> -0.005	> -0.005	> -0.005	> -0.005	> -0.005
African Sumac	> -0.005	< 0.005	—	< 0.005	> -0.005	> -0.005	> -0.005	> -0.005	> -0.005	> -0.005

Subtotal	-0.01	< 0.005	—	< 0.005	-0.01	-0.01	-0.01	> -0.005	> -0.005	> -0.005
Sequestered	—	—	—	—	—	—	—	—	—	—
Olive	—	—	—	—	—	—	—	—	—	—
Chinese Pistache	—	—	—	—	—	—	—	—	—	—
Sycamore	—	—	—	—	—	—	—	—	—	—
Quercus Acutifolia	—	—	—	—	—	—	—	—	—	—
Coastal Live Oak	—	—	—	—	—	—	—	—	—	—
Chinese Elm	—	—	—	—	—	—	—	—	—	—
Fern Tree	—	—	—	—	—	—	—	—	—	—
Tristania	—	—	—	—	—	—	—	—	—	—
Ulmus	—	—	—	—	—	—	—	—	—	—
Strawberry Tree	—	—	—	—	—	—	—	—	—	—
Magnolia	—	—	—	—	—	—	—	—	—	—
Wilga	—	—	—	—	—	—	—	—	—	—
Guava Crape Myrtle	—	—	—	—	—	—	—	—	—	—
Date Palm	—	—	—	—	—	—	—	—	—	—
Bay	—	—	—	—	—	—	—	—	—	—
African Sumac	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—
Olive	—	> -0.005	—	> -0.005	> -0.005	> -0.005	> -0.005	> -0.005	> -0.005	> -0.005
Chinese Pistache	—	> -0.005	—	> -0.005	> -0.005	> -0.005	> -0.005	> -0.005	> -0.005	> -0.005
Sycamore	—	> -0.005	—	> -0.005	> -0.005	> -0.005	> -0.005	> -0.005	> -0.005	> -0.005
Quercus Acutifolia	—	> -0.005	—	> -0.005	> -0.005	> -0.005	> -0.005	> -0.005	> -0.005	> -0.005

Coastal Live Oak	—	> -0.005	—	> -0.005	> -0.005	> -0.005	> -0.005	> -0.005	> -0.005	> -0.005
Chinese Elm	—	> -0.005	—	> -0.005	> -0.005	> -0.005	> -0.005	> -0.005	> -0.005	> -0.005
Fern Tree	—	> -0.005	—	> -0.005	> -0.005	> -0.005	> -0.005	> -0.005	> -0.005	> -0.005
Tristania	—	> -0.005	—	> -0.005	> -0.005	> -0.005	> -0.005	> -0.005	> -0.005	> -0.005
Ulmus	—	> -0.005	—	> -0.005	> -0.005	> -0.005	> -0.005	> -0.005	> -0.005	> -0.005
Strawberry Tree	—	> -0.005	—	> -0.005	> -0.005	> -0.005	> -0.005	> -0.005	> -0.005	> -0.005
Magnolia	—	> -0.005	—	> -0.005	> -0.005	> -0.005	> -0.005	> -0.005	> -0.005	> -0.005
Wilga	—	> -0.005	—	> -0.005	> -0.005	> -0.005	> -0.005	> -0.005	> -0.005	> -0.005
Guava Crape Myrtle	—	> -0.005	—	> -0.005	> -0.005	> -0.005	> -0.005	> -0.005	> -0.005	> -0.005
Date Palm	—	> -0.005	—	> -0.005	> -0.005	> -0.005	> -0.005	> -0.005	> -0.005	> -0.005
Bay	—	> -0.005	—	> -0.005	> -0.005	> -0.005	> -0.005	> -0.005	> -0.005	> -0.005
African Sumac	—	> -0.005	—	> -0.005	> -0.005	> -0.005	> -0.005	> -0.005	> -0.005	> -0.005
Subtotal	—	-0.02	—	> -0.005	> -0.005	> -0.005	> -0.005	> -0.005	> -0.005	> -0.005
—	—	—	—	—	—	—	—	—	—	—
Total	-0.01	-0.02	—	< 0.005	-0.01	-0.01	-0.02	> -0.005	> -0.005	> -0.005
Annual	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—
Olive	> -0.005	> -0.005	—	> -0.005	> -0.005	> -0.005	> -0.005	> -0.005	> -0.005	> -0.005
Chinese Pistache	> -0.005	> -0.005	—	> -0.005	> -0.005	> -0.005	> -0.005	> -0.005	> -0.005	> -0.005
Sycamore	> -0.005	< 0.005	—	< 0.005	> -0.005	> -0.005	> -0.005	> -0.005	> -0.005	> -0.005
Quercus Acutifolia	> -0.005	< 0.005	—	< 0.005	> -0.005	> -0.005	> -0.005	> -0.005	> -0.005	> -0.005
Coastal Live Oak	> -0.005	< 0.005	—	< 0.005	> -0.005	> -0.005	> -0.005	> -0.005	> -0.005	> -0.005
Chinese Elm	> -0.005	< 0.005	—	< 0.005	> -0.005	> -0.005	> -0.005	> -0.005	> -0.005	> -0.005
Fern Tree	> -0.005	> -0.005	—	> -0.005	> -0.005	> -0.005	> -0.005	> -0.005	> -0.005	> -0.005
Tristania	> -0.005	< 0.005	—	< 0.005	> -0.005	> -0.005	> -0.005	> -0.005	> -0.005	> -0.005

Ulmus	> -0.005	> -0.005	—	> -0.005	> -0.005	> -0.005	> -0.005	> -0.005	> -0.005	> -0.005
Strawberry Tree	> -0.005	> -0.005	—	> -0.005	> -0.005	> -0.005	> -0.005	> -0.005	> -0.005	> -0.005
Magnolia	> -0.005	< 0.005	—	< 0.005	> -0.005	> -0.005	> -0.005	> -0.005	> -0.005	> -0.005
Wilga	< 0.005	< 0.005	—	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005
Guava Crape Myrtle	> -0.005	< 0.005	—	< 0.005	> -0.005	> -0.005	> -0.005	> -0.005	> -0.005	> -0.005
Date Palm	> -0.005	< 0.005	—	< 0.005	> -0.005	> -0.005	> -0.005	> -0.005	> -0.005	> -0.005
Bay	> -0.005	> -0.005	—	> -0.005	> -0.005	> -0.005	> -0.005	> -0.005	> -0.005	> -0.005
African Sumac	> -0.005	< 0.005	—	< 0.005	> -0.005	> -0.005	> -0.005	> -0.005	> -0.005	> -0.005
Subtotal	> -0.005	< 0.005	—	< 0.005	> -0.005	> -0.005	> -0.005	> -0.005	> -0.005	> -0.005
Sequestered	—	—	—	—	—	—	—	—	—	—
Olive	—	—	—	—	—	—	—	—	—	—
Chinese Pistache	—	—	—	—	—	—	—	—	—	—
Sycamore	—	—	—	—	—	—	—	—	—	—
Quercus Acutifolia	—	—	—	—	—	—	—	—	—	—
Coastal Live Oak	—	—	—	—	—	—	—	—	—	—
Chinese Elm	—	—	—	—	—	—	—	—	—	—
Fern Tree	—	—	—	—	—	—	—	—	—	—
Tristania	—	—	—	—	—	—	—	—	—	—
Ulmus	—	—	—	—	—	—	—	—	—	—
Strawberry Tree	—	—	—	—	—	—	—	—	—	—
Magnolia	—	—	—	—	—	—	—	—	—	—
Wilga	—	—	—	—	—	—	—	—	—	—
Guava Crape Myrtle	—	—	—	—	—	—	—	—	—	—
Date Palm	—	—	—	—	—	—	—	—	—	—
Bay	—	—	—	—	—	—	—	—	—	—

African Sumac	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—
Olive	—	> -0.005	—	> -0.005	> -0.005	> -0.005	> -0.005	> -0.005	> -0.005	> -0.005
Chinese Pistache	—	> -0.005	—	> -0.005	> -0.005	> -0.005	> -0.005	> -0.005	> -0.005	> -0.005
Sycamore	—	> -0.005	—	> -0.005	> -0.005	> -0.005	> -0.005	> -0.005	> -0.005	> -0.005
Quercus Acutifolia	—	> -0.005	—	> -0.005	> -0.005	> -0.005	> -0.005	> -0.005	> -0.005	> -0.005
Coastal Live Oak	—	> -0.005	—	> -0.005	> -0.005	> -0.005	> -0.005	> -0.005	> -0.005	> -0.005
Chinese Elm	—	> -0.005	—	> -0.005	> -0.005	> -0.005	> -0.005	> -0.005	> -0.005	> -0.005
Fern Tree	—	> -0.005	—	> -0.005	> -0.005	> -0.005	> -0.005	> -0.005	> -0.005	> -0.005
Tristania	—	> -0.005	—	> -0.005	> -0.005	> -0.005	> -0.005	> -0.005	> -0.005	> -0.005
Ulmus	—	> -0.005	—	> -0.005	> -0.005	> -0.005	> -0.005	> -0.005	> -0.005	> -0.005
Strawberry Tree	—	> -0.005	—	> -0.005	> -0.005	> -0.005	> -0.005	> -0.005	> -0.005	> -0.005
Magnolia	—	> -0.005	—	> -0.005	> -0.005	> -0.005	> -0.005	> -0.005	> -0.005	> -0.005
Wilga	—	> -0.005	—	> -0.005	> -0.005	> -0.005	> -0.005	> -0.005	> -0.005	> -0.005
Guava Crape Myrtle	—	> -0.005	—	> -0.005	> -0.005	> -0.005	> -0.005	> -0.005	> -0.005	> -0.005
Date Palm	—	> -0.005	—	> -0.005	> -0.005	> -0.005	> -0.005	> -0.005	> -0.005	> -0.005
Bay	—	> -0.005	—	> -0.005	> -0.005	> -0.005	> -0.005	> -0.005	> -0.005	> -0.005
African Sumac	—	> -0.005	—	> -0.005	> -0.005	> -0.005	> -0.005	> -0.005	> -0.005	> -0.005
Subtotal	—	> -0.005	—	> -0.005	> -0.005	> -0.005	> -0.005	> -0.005	> -0.005	> -0.005
—	—	—	—	—	—	—	—	—	—	—
Total	> -0.005	> -0.005	—	< 0.005	> -0.005	> -0.005	> -0.005	> -0.005	> -0.005	> -0.005

5. Activity Data

5.1. Construction Schedule

Phase Name	Phase Type	Start Date	End Date	Days Per Week	Work Days per Phase	Phase Description
Demolition	Demolition	1/1/2025	4/30/2025	5.00	86.0	—
Grading	Grading	5/1/2025	8/31/2025	5.00	87.0	—
Building Construction	Building Construction	11/1/2025	6/30/2026	5.00	172	—
Paving	Paving	8/1/2025	9/30/2025	5.00	43.0	—
Architectural Coating	Architectural Coating	11/1/2025	6/30/2026	5.00	172	—
Trenching	Trenching	3/1/2025	7/31/2025	5.00	109	—

5.2. Off-Road Equipment

5.2.1. Unmitigated

Phase Name	Equipment Type	Fuel Type	Engine Tier	Number per Day	Hours Per Day	Horsepower	Load Factor
Demolition	Concrete/Industrial Saws	Diesel	Average	1.00	8.00	33.0	0.73
Demolition	Excavators	Diesel	Average	3.00	8.00	36.0	0.38
Demolition	Rubber Tired Dozers	Diesel	Average	2.00	8.00	367	0.40
Grading	Excavators	Diesel	Average	2.00	8.00	36.0	0.38
Grading	Graders	Diesel	Average	1.00	8.00	148	0.41
Grading	Rubber Tired Dozers	Diesel	Average	1.00	8.00	367	0.40
Grading	Scrapers	Diesel	Average	2.00	8.00	423	0.48
Grading	Tractors/Loaders/Backhoes	Diesel	Average	2.00	8.00	84.0	0.37
Building Construction	Cranes	Diesel	Average	1.00	7.00	367	0.29
Building Construction	Forklifts	Diesel	Average	3.00	8.00	82.0	0.20
Building Construction	Generator Sets	Diesel	Average	1.00	8.00	14.0	0.74
Building Construction	Tractors/Loaders/Backhoes	Diesel	Average	3.00	7.00	84.0	0.37
Building Construction	Welders	Diesel	Average	1.00	8.00	46.0	0.45

Paving	Pavers	Diesel	Average	2.00	8.00	81.0	0.42
Paving	Paving Equipment	Diesel	Average	2.00	8.00	89.0	0.36
Paving	Rollers	Diesel	Average	2.00	8.00	36.0	0.38
Architectural Coating	Air Compressors	Diesel	Average	1.00	6.00	37.0	0.48
Trenching	Trenchers	Diesel	Average	1.00	8.00	40.0	0.50

5.3. Construction Vehicles

5.3.1. Unmitigated

Phase Name	Trip Type	One-Way Trips per Day	Miles per Trip	Vehicle Mix
Demolition	—	—	—	—
Demolition	Worker	15.0	18.5	LDA,LDT1,LDT2
Demolition	Vendor	—	10.2	HHDT,MHDT
Demolition	Hauling	63.3	50.0	HHDT
Demolition	Onsite truck	—	—	HHDT
Grading	—	—	—	—
Grading	Worker	20.0	18.5	LDA,LDT1,LDT2
Grading	Vendor	—	10.2	HHDT,MHDT
Grading	Hauling	4.31	20.0	HHDT
Grading	Onsite truck	—	—	HHDT
Building Construction	—	—	—	—
Building Construction	Worker	320	18.5	LDA,LDT1,LDT2
Building Construction	Vendor	70.5	10.2	HHDT,MHDT
Building Construction	Hauling	0.00	20.0	HHDT
Building Construction	Onsite truck	—	—	HHDT
Paving	—	—	—	—
Paving	Worker	15.0	18.5	LDA,LDT1,LDT2
Paving	Vendor	—	10.2	HHDT,MHDT

Paving	Hauling	0.00	20.0	HHDT
Paving	Onsite truck	—	—	HHDT
Architectural Coating	—	—	—	—
Architectural Coating	Worker	63.9	18.5	LDA,LDT1,LDT2
Architectural Coating	Vendor	—	10.2	HHDT,MHDT
Architectural Coating	Hauling	0.00	20.0	HHDT
Architectural Coating	Onsite truck	—	—	HHDT
Trenching	—	—	—	—
Trenching	Worker	2.50	18.5	LDA,LDT1,LDT2
Trenching	Vendor	—	10.2	HHDT,MHDT
Trenching	Hauling	0.00	20.0	HHDT
Trenching	Onsite truck	—	—	HHDT

5.4. Vehicles

5.4.1. Construction Vehicle Control Strategies

Non-applicable. No control strategies activated by user.

5.5. Architectural Coatings

Phase Name	Residential Interior Area Coated (sq ft)	Residential Exterior Area Coated (sq ft)	Non-Residential Interior Area Coated (sq ft)	Non-Residential Exterior Area Coated (sq ft)	Parking Area Coated (sq ft)
Architectural Coating	908,628	302,876	4,058	451	8,024

5.6. Dust Mitigation

5.6.1. Construction Earthmoving Activities

Phase Name	Material Imported (Cubic Yards)	Material Exported (Cubic Yards)	Acres Graded (acres)	Material Demolished (Ton of Debris)	Acres Paved (acres)
Demolition	0.00	0.00	0.00	21,775	—

Grading	3,000	—	261	0.00	—
Paving	0.00	0.00	0.00	0.00	3.07

5.6.2. Construction Earthmoving Control Strategies

Control Strategies Applied	Frequency (per day)	PM10 Reduction	PM2.5 Reduction
Water Exposed Area	2	61%	61%
Water Demolished Area	2	36%	36%

5.7. Construction Paving

Land Use	Area Paved (acres)	% Asphalt
Apartments Low Rise	—	0%
Condo/Townhouse	—	0%
Enclosed Parking Structure	2.07	100%
Parking Lot	1.00	100%

5.8. Construction Electricity Consumption and Emissions Factors

kWh per Year and Emission Factor (lb/MWh)

Year	kWh per Year	CO2	CH4	N2O
2025	0.00	349	0.03	< 0.005
2026	0.00	346	0.03	< 0.005

5.9. Operational Mobile Sources

5.9.1. Unmitigated

Land Use Type	Trips/Weekday	Trips/Saturday	Trips/Sunday	Trips/Year	VMT/Weekday	VMT/Saturday	VMT/Sunday	VMT/Year
Total all Land Uses	2,350	2,350	2,350	857,750	43,240	43,240	43,240	15,782,600

5.10. Operational Area Sources

5.10.1. Hearths

5.10.1.1. Unmitigated

Hearth Type	Unmitigated (number)
Apartments Low Rise	—
Wood Fireplaces	0
Gas Fireplaces	0
Propane Fireplaces	0
Electric Fireplaces	0
No Fireplaces	29
Conventional Wood Stoves	0
Catalytic Wood Stoves	0
Non-Catalytic Wood Stoves	0
Pellet Wood Stoves	0
Condo/Townhouse	—
Wood Fireplaces	0
Gas Fireplaces	0
Propane Fireplaces	0
Electric Fireplaces	0
No Fireplaces	283
Conventional Wood Stoves	0
Catalytic Wood Stoves	0
Non-Catalytic Wood Stoves	0
Pellet Wood Stoves	0

5.10.2. Architectural Coatings

Residential Interior Area Coated (sq ft)	Residential Exterior Area Coated (sq ft)	Non-Residential Interior Area Coated (sq ft)	Non-Residential Exterior Area Coated (sq ft)	Parking Area Coated (sq ft)
908627.625	302,876	4,058	451	8,024

5.10.3. Landscape Equipment

Season	Unit	Value
Snow Days	day/yr	0.00
Summer Days	day/yr	250

5.11. Operational Energy Consumption

5.11.1. Unmitigated

Electricity (kWh/yr) and CO2 and CH4 and N2O and Natural Gas (kBTU/yr)

Land Use	Electricity (kWh/yr)	CO2	CH4	N2O	Natural Gas (kBTU/yr)
Apartments Low Rise	111,216	346	0.0330	0.0040	472,865
Condo/Townhouse	1,299,583	346	0.0330	0.0040	6,800,591
Enclosed Parking Structure	792,724	346	0.0330	0.0040	0.00
Parking Lot	38,159	346	0.0330	0.0040	0.00

5.12. Operational Water and Wastewater Consumption

5.12.1. Unmitigated

Land Use	Indoor Water (gal/year)	Outdoor Water (gal/year)
Apartments Low Rise	1,080,940	0.00
Condo/Townhouse	10,548,485	2,184,126
Enclosed Parking Structure	0.00	0.00
Parking Lot	0.00	0.00

5.13. Operational Waste Generation

5.13.1. Unmitigated

Land Use	Waste (ton/year)	Cogeneration (kWh/year)
Apartments Low Rise	25.0	—
Condo/Townhouse	243	—
Enclosed Parking Structure	0.00	—
Parking Lot	0.00	—

5.14. Operational Refrigeration and Air Conditioning Equipment

5.14.1. Unmitigated

Land Use Type	Equipment Type	Refrigerant	GWP	Quantity (kg)	Operations Leak Rate	Service Leak Rate	Times Serviced
Apartments Low Rise	Average room A/C & Other residential A/C and heat pumps	R-410A	2,088	< 0.005	2.50	2.50	10.0
Apartments Low Rise	Household refrigerators and/or freezers	R-134a	1,430	0.12	0.60	0.00	1.00
Condo/Townhouse	Average room A/C & Other residential A/C and heat pumps	R-410A	2,088	< 0.005	2.50	2.50	10.0
Condo/Townhouse	Household refrigerators and/or freezers	R-134a	1,430	0.12	0.60	0.00	1.00

5.15. Operational Off-Road Equipment

5.15.1. Unmitigated

Equipment Type	Fuel Type	Engine Tier	Number per Day	Hours Per Day	Horsepower	Load Factor

5.16. Stationary Sources

5.16.1. Emergency Generators and Fire Pumps

Equipment Type	Fuel Type	Number per Day	Hours per Day	Hours per Year	Horsepower	Load Factor

5.16.2. Process Boilers

Equipment Type	Fuel Type	Number	Boiler Rating (MMBtu/hr)	Daily Heat Input (MMBtu/day)	Annual Heat Input (MMBtu/yr)

5.17. User Defined

Equipment Type	Fuel Type

5.18. Vegetation

5.18.1. Land Use Change

5.18.1.1. Unmitigated

Vegetation Land Use Type	Vegetation Soil Type	Initial Acres	Final Acres

5.18.1. Biomass Cover Type

5.18.1.1. Unmitigated

Biomass Cover Type	Initial Acres	Final Acres

5.18.2. Sequestration

5.18.2.1. Unmitigated

Tree Type	Number	Electricity Saved (kWh/year)	Natural Gas Saved (btu/year)

Olive	10.0	21,352	106
Chinese Pistache	10.0	9,051	29.0
Sycamore	10.0	23,722	-167
Quercus Acutifolia	10.0	6,925	-546
Coastal Live Oak	10.0	9,916	-316
Chinese Elm	10.0	19,339	-140
Fern Tree	5.00	13,971	-67.0
Tristania	5.00	12,671	-75.0
Ulmus	5.00	7,463	24.0
Strawberry Tree	5.00	9,912	49.0
Magnolia	5.00	9,049	-86.0
Tristania	5.00	941	-280
Wilga	5.00	-268	-82.0
Guava Crape Myrtle	5.00	28,861	-45.0
Date Palm	5.00	3,268	-29.0
Bay	5.00	14,606	-39.0
African Sumac	5.00	5,915	-98.0

6. Climate Risk Detailed Report

6.1. Climate Risk Summary

Cal-Adapt midcentury 2040–2059 average projections for four hazards are reported below for your project location. These are under Representation Concentration Pathway (RCP) 8.5 which assumes GHG emissions will continue to rise strongly through 2050 and then plateau around 2100.

Climate Hazard	Result for Project Location	Unit
Temperature and Extreme Heat	5.08	annual days of extreme heat
Extreme Precipitation	4.20	annual days with precipitation above 20 mm
Sea Level Rise	—	meters of inundation depth
Wildfire	0.00	annual hectares burned

Temperature and Extreme Heat data are for grid cell in which your project are located. The projection is based on the 98th historical percentile of daily maximum/minimum temperatures from observed historical data (32 climate model ensemble from Cal-Adapt, 2040–2059 average under RCP 8.5). Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.
Extreme Precipitation data are for the grid cell in which your project are located. The threshold of 20 mm is equivalent to about ¾ an inch of rain, which would be light to moderate rainfall if received over a full day or heavy rain if received over a period of 2 to 4 hours. Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.
Sea Level Rise data are for the grid cell in which your project are located. The projections are from Radke et al. (2017), as reported in Cal-Adapt (Radke et al., 2017, CEC-500-2017-008), and consider inundation location and depth for the San Francisco Bay, the Sacramento-San Joaquin River Delta and California coast resulting different increments of sea level rise coupled with extreme storm events. Users may select from four scenarios to view the range in potential inundation depth for the grid cell. The four scenarios are: No rise, 0.5 meter, 1.0 meter, 1.41 meters
Wildfire data are for the grid cell in which your project are located. The projections are from UC Davis, as reported in Cal-Adapt (2040–2059 average under RCP 8.5), and consider historical data of climate, vegetation, population density, and large (> 400 ha) fire history. Users may select from four model simulations to view the range in potential wildfire probabilities for the grid cell. The four simulations make different assumptions about expected rainfall and temperature are: Warmer/drier (HadGEM2-ES), Cooler/wetter (CNRM-CM5), Average conditions (CanESM2), Range of different rainfall and temperature possibilities (MIROC5). Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.

6.2. Initial Climate Risk Scores

Climate Hazard	Exposure Score	Sensitivity Score	Adaptive Capacity Score	Vulnerability Score
Temperature and Extreme Heat	1	0	0	N/A
Extreme Precipitation	N/A	N/A	N/A	N/A
Sea Level Rise	1	0	0	N/A
Wildfire	1	0	0	N/A
Flooding	N/A	N/A	N/A	N/A
Drought	N/A	N/A	N/A	N/A
Snowpack Reduction	N/A	N/A	N/A	N/A
Air Quality Degradation	0	0	0	N/A

The sensitivity score reflects the extent to which a project would be adversely affected by exposure to a climate hazard. Exposure is rated on a scale of 1 to 5, with a score of 5 representing the greatest exposure.
The adaptive capacity of a project refers to its ability to manage and reduce vulnerabilities from projected climate hazards. Adaptive capacity is rated on a scale of 1 to 5, with a score of 5 representing the greatest ability to adapt.
The overall vulnerability scores are calculated based on the potential impacts and adaptive capacity assessments for each hazard. Scores do not include implementation of climate risk reduction measures.

6.3. Adjusted Climate Risk Scores

Climate Hazard	Exposure Score	Sensitivity Score	Adaptive Capacity Score	Vulnerability Score
Temperature and Extreme Heat	1	1	1	2
Extreme Precipitation	N/A	N/A	N/A	N/A
Sea Level Rise	1	1	1	2

Wildfire	1	1	1	2
Flooding	N/A	N/A	N/A	N/A
Drought	N/A	N/A	N/A	N/A
Snowpack Reduction	N/A	N/A	N/A	N/A
Air Quality Degradation	1	1	1	2

The sensitivity score reflects the extent to which a project would be adversely affected by exposure to a climate hazard. Exposure is rated on a scale of 1 to 5, with a score of 5 representing the greatest exposure.
The adaptive capacity of a project refers to its ability to manage and reduce vulnerabilities from projected climate hazards. Adaptive capacity is rated on a scale of 1 to 5, with a score of 5 representing the greatest ability to adapt.
The overall vulnerability scores are calculated based on the potential impacts and adaptive capacity assessments for each hazard. Scores include implementation of climate risk reduction measures.

6.4. Climate Risk Reduction Measures

7. Health and Equity Details

7.1. CalEnviroScreen 4.0 Scores

The maximum CalEnviroScreen score is 100. A high score (i.e., greater than 50) reflects a higher pollution burden compared to other census tracts in the state.

Indicator	Result for Project Census Tract
Exposure Indicators	—
AQ-Ozone	22.2
AQ-PM	80.6
AQ-DPM	86.0
Drinking Water	29.4
Lead Risk Housing	59.8
Pesticides	0.00
Toxic Releases	98.8
Traffic	95.4
Effect Indicators	—
CleanUp Sites	89.2
Groundwater	94.0

Haz Waste Facilities/Generators	67.0
Impaired Water Bodies	93.4
Solid Waste	54.8
Sensitive Population	—
Asthma	76.6
Cardio-vascular	82.7
Low Birth Weights	74.9
Socioeconomic Factor Indicators	—
Education	62.2
Housing	28.2
Linguistic	77.1
Poverty	49.7
Unemployment	43.1

7.2. Healthy Places Index Scores

The maximum Health Places Index score is 100. A high score (i.e., greater than 50) reflects healthier community conditions compared to other census tracts in the state.

Indicator	Result for Project Census Tract
Economic	—
Above Poverty	57.92377775
Employed	62.37649172
Median HI	55.88348518
Education	—
Bachelor's or higher	53.18875914
High school enrollment	100
Preschool enrollment	48.45374054
Transportation	—
Auto Access	31.27165405
Active commuting	35.41639933

Social	—
2-parent households	72.60361863
Voting	9.29038881
Neighborhood	—
Alcohol availability	51.72590787
Park access	27.21673297
Retail density	43.47491338
Supermarket access	40.56204286
Tree canopy	50.87899397
Housing	—
Homeownership	92.2751187
Housing habitability	75.06736815
Low-inc homeowner severe housing cost burden	74.6439112
Low-inc renter severe housing cost burden	51.52059541
Uncrowded housing	28.33311947
Health Outcomes	—
Insured adults	43.11561658
Arthritis	59.3
Asthma ER Admissions	30.5
High Blood Pressure	37.6
Cancer (excluding skin)	49.7
Asthma	94.4
Coronary Heart Disease	54.4
Chronic Obstructive Pulmonary Disease	74.0
Diagnosed Diabetes	25.3
Life Expectancy at Birth	63.6
Cognitively Disabled	50.3
Physically Disabled	14.3

Heart Attack ER Admissions	25.8
Mental Health Not Good	69.9
Chronic Kidney Disease	45.1
Obesity	76.5
Pedestrian Injuries	19.6
Physical Health Not Good	51.8
Stroke	51.7
Health Risk Behaviors	—
Binge Drinking	89.1
Current Smoker	71.8
No Leisure Time for Physical Activity	41.3
Climate Change Exposures	—
Wildfire Risk	0.0
SLR Inundation Area	0.0
Children	68.4
Elderly	14.5
English Speaking	25.4
Foreign-born	90.0
Outdoor Workers	75.3
Climate Change Adaptive Capacity	—
Impervious Surface Cover	11.0
Traffic Density	92.2
Traffic Access	61.6
Other Indices	—
Hardship	56.0
Other Decision Support	—
2016 Voting	18.3

7.3. Overall Health & Equity Scores

Metric	Result for Project Census Tract
CalEnviroScreen 4.0 Score for Project Location (a)	92.0
Healthy Places Index Score for Project Location (b)	51.0
Project Located in a Designated Disadvantaged Community (Senate Bill 535)	Yes
Project Located in a Low-Income Community (Assembly Bill 1550)	Yes
Project Located in a Community Air Protection Program Community (Assembly Bill 617)	Wilmington Long Beach Carson

a: The maximum CalEnviroScreen score is 100. A high score (i.e., greater than 50) reflects a higher pollution burden compared to other census tracts in the state.
b: The maximum Health Places Index score is 100. A high score (i.e., greater than 50) reflects healthier community conditions compared to other census tracts in the state.

7.4. Health & Equity Measures

No Health & Equity Measures selected.

7.5. Evaluation Scorecard

Health & Equity Evaluation Scorecard not completed.

7.6. Health & Equity Custom Measures

No Health & Equity Custom Measures created.

8. User Changes to Default Data

Screen	Justification
Characteristics: Project Details	—
Land Use	Population assumes 3.43 persons per unit per SCAG 2020-2045 RTP/SCS demographic information for City of Carson in 2045.
Construction: Construction Phases	Developer information
Construction: Off-Road Equipment	—
Construction: Trips and VMT	—
Operations: Hearths	Project plans



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MATES V TOXIC EMISSIONS OVERVIEW

About Air Toxics Cancer Risk

Information about community profile statistics
Information about emission sources
Download PDF

Residential Air Toxics Cancer Risk at MATES Monitoring Sites

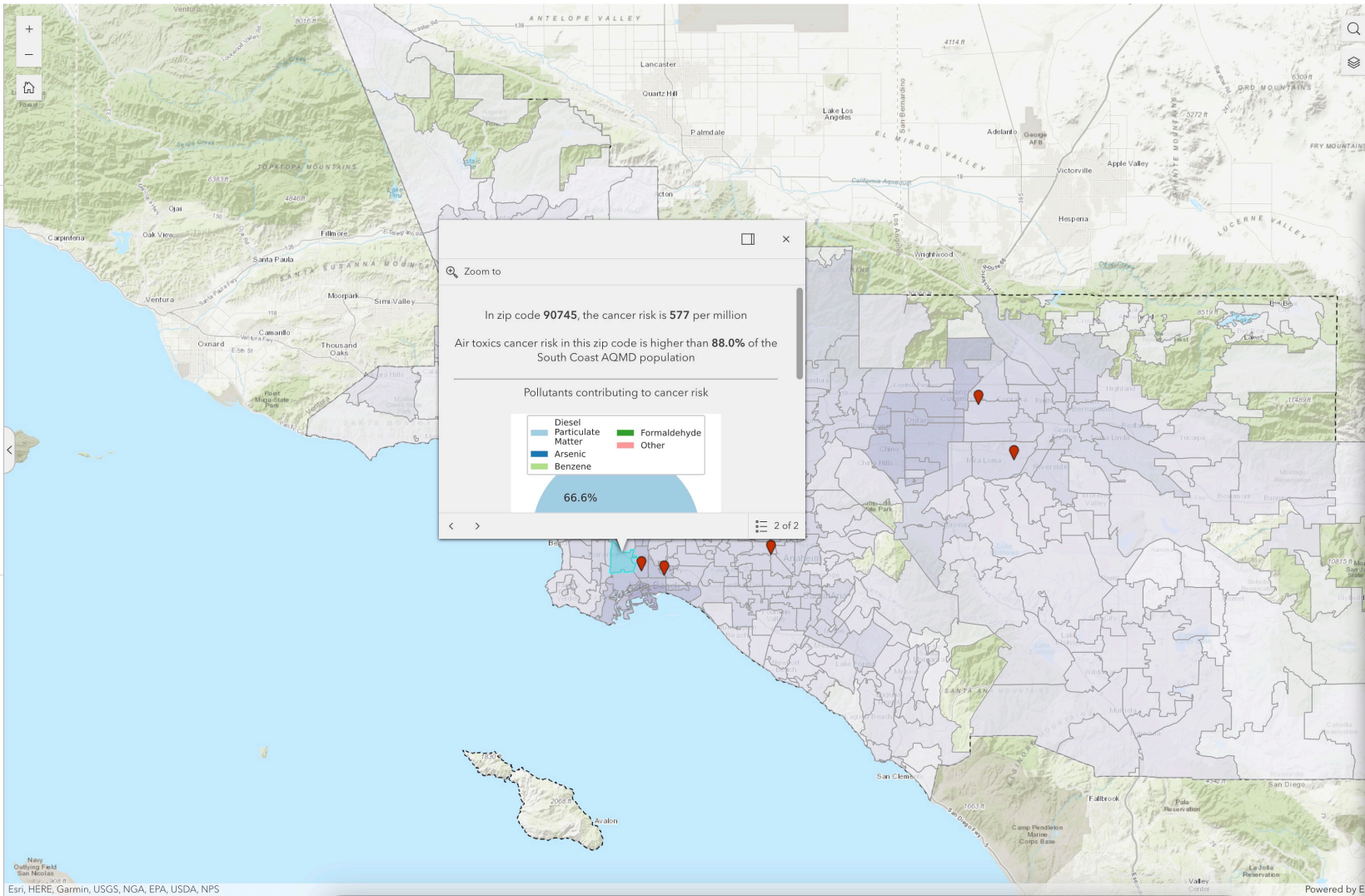
Residential Air Toxics Cancer Risk Calculated from Model Data

Cancer Risk [per million]

- 1601 - 4800
- 1451 - 1600
- 1301 - 1450
- 1151 - 1300
- 1001 - 1150
- 851 - 1000
- 701 - 850
- 551 - 700
- 401 - 550
- 251 - 400
- 101 - 250
- 0 - 100

South Coast AQMD Boundary

The air toxics cancer risk data presented in the MATES Data Visualization is calculated using a population-weighted average.





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CALENVIROSCREEN 4.0 OUTPUT

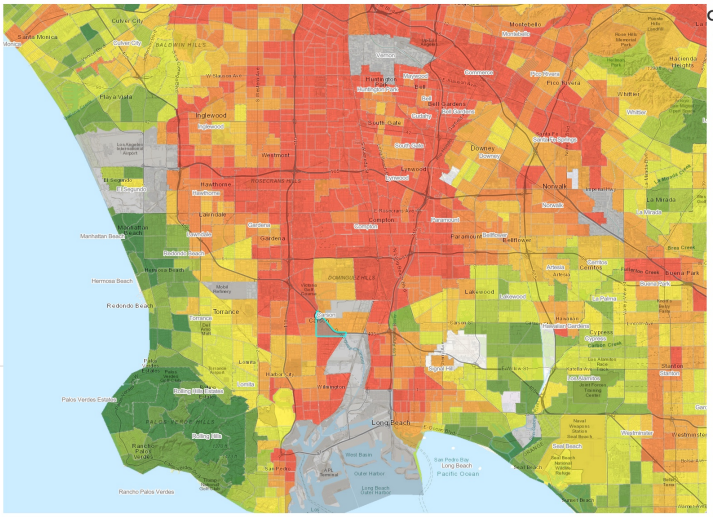
calee

Legend

CalEnviroScreen 4.0 Results

- > 90 – 100 (Highest Scores)
- > 80 – 90
- > 70 – 80
- > 60 – 70
- > 50 – 60
- > 40 – 50
- > 30 – 40
- > 20 – 30
- > 10 – 20
- 0 – 10 (Lowest Scores)

CalEnviroScreen 4.0 High Pollution, Low Population



Census Tract: 6037543903 (Population: 3,740)

The results for each indicator range from 0-100 and represent the percentile ranking of census tract 6037543903 relative to other census tracts.

Overall Percentiles	
CalEnviroScreen 4.0 Percentile	92
Pollution Burden Percentile	96
Population Characteristics Percentile	73

Exposures	
Ozone	22
Particulate Matter 2.5	81
Diesel Particulate Matter	86
Toxic Releases	99
Traffic	95
Pesticides	0
Drinking Water	29
Lead from Housing	60

Environmental Effects	
Cleanup Sites	89
Groundwater Threats	94
Hazardous Waste	67
Impaired Waters	93
Solid Waste	55

Sensitive Populations	
Asthma	77
Low Birth Weight	75
Cardiovascular Disease	83

Socioeconomic Factors	
Education	62
Linguistic Isolation	77
Poverty	50
Unemployment	43
Housing Burden	28



Race/Ethnicity Profiles

Hover your mouse over the pie chart segment to see the race/ethnicity in percentages and approximate counts.



Age Profiles

Hover your mouse over the pie chart segment to see the age characteristics in percentages and approximate counts.



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TREE SEQUESTRATION CALCULATIONS

Project Report - i-Tree Planting Calculator

Location: Carson, California 90745
Total number of trees planted in this project: 117
Electricity Emissions Factor: 252.40 kilograms CO2 equivalent/MWh
Fuel Emissions Factor: 52.00 kilograms CO2 equivalent/MMBtu
Lifetime: 40 years
Annual Tree Mortality: 3%

All amounts in the tables are for the full lifetime of the project.

Location			Tree Growth					
Group Identifier	Tree Group Characteristics	Initial Number of Trees	DBH (The estimated DBH at the end of the projection) ()	Height (The estimated tree height at the end of the projection) ()	Surviving Trees (The number of trees that survive at the end of the projection based on the mortality rate. The models do estimate fractions of individual trees remaining after mortality for the most precise estimates of the benefits.)	Basal Area (The estimated combined basal area of surviving trees at the end of the projection.) ()	Canopy Cover (The estimated combined crown area of surviving trees at the end of the projection. This combined crown area estimate assumes no overlap between tree crowns and represents the maximum area that these trees could possibly cover.) ()	Biomass (The estimated combined biomass of surviving trees at the end of the projection.) (pounds)
1	• 10 Olive spp(Olea) trees of 2 inches initial DBH (Diameter at Breast Height). • Planted 0-19 feet and north (0°) of buildings that were built post-1980 with heating and cooling. • Trees are in excellent condition and planted in full sun.	10	18.5	68.0	3.0	5.7	1,167.2	4.9
2	• 10 Chinese pistache(Pistacia chinensis) trees of 2 inches initial DBH (Diameter at Breast Height). • Planted 0-19 feet and north (0°) of buildings that were built post-1980 with heating and cooling. • Trees are in excellent condition and planted in full sun.	10	30.6	60.5	3.0	15.5	4,294.6	14.7
3	• 10 Sycamore spp(Platanus) trees of 2 inches initial DBH (Diameter at Breast Height). • Planted 0-19 feet and south (180°) of buildings that were built post-1980 with heating and cooling. • Trees are in excellent condition and planted in full sun.	10	32.7	81.8	3.0	17.8	5,769.9	9.3
4	• 10 Quercus acutifolia(Quercus acutifolia) trees of 2 inches initial DBH (Diameter at Breast Height). • Planted 0-19 feet and south (180°) of buildings that were built post-1980 with heating and cooling. • Trees are in excellent condition and planted in full sun.	10	18.7	70.9	3.0	5.8	2,454.9	4.9

Location			Tree Growth					
Group Identifier	Tree Group Characteristics	Initial Number of Trees	DBH (The estimated DBH at the end of the projection) ()	Height (The estimated tree height at the end of the projection) ()	Surviving Trees (The number of trees that survive at the end of the projection based on the mortality rate. The models do estimate fractions of individual trees remaining after mortality for the most precise estimates of the benefits.)	Basal Area (The estimated combined basal area of surviving trees at the end of the projection.) ()	Canopy Cover (The estimated combined crown area of surviving trees at the end of the projection. This combined crown area estimate assumes no overlap between tree crowns and represents the maximum area that these trees could possibly cover.) ()	Biomass (The estimated combined biomass of surviving trees at the end of the projection.) (pounds)
5	• 10 Coastal live oak(Quercus agrifolia) trees of 2 inches initial DBH (Diameter at Breast Height). • Planted 0-19 feet and east (90°) of buildings that were built post-1980 with heating and cooling. • Trees are in excellent condition and planted in full sun.	10	23.4	78.3	3.0	9.1	3,173.7	9.3
6	• 10 Chinese elm(Ulmus parvifolia) trees of 2 inches initial DBH (Diameter at Breast Height). • Planted 0-19 feet and east (90°) of buildings that were built post-1980 with heating and cooling. • Trees are in excellent condition and planted in full sun.	10	41.3	95.1	3.0	28.4	7,073.2	34.3
7	• 5 Fern tree(Filicium decipiens) trees of 2 inches initial DBH (Diameter at Breast Height). • Planted 0-19 feet and west (270°) of buildings that were built post-1980 with heating and cooling. • Trees are in excellent condition and planted in full sun.	5	32.7	89.4	1.5	8.9	1,655.7	16.5
8	• 5 Ttristania spp(Tristania) trees of 2 inches initial DBH (Diameter at Breast Height). • Planted 0-19 feet and west (270°) of buildings that were built post-1980 with heating and cooling. • Trees are in excellent condition and planted in full sun.	5	30.6	69.8	1.5	7.8	1,323.1	14.5

Location			Tree Growth					
Group Identifier	Tree Group Characteristics	Initial Number of Trees	DBH (The estimated DBH at the end of the projection) ()	Height (The estimated tree height at the end of the projection) ()	Surviving Trees (The number of trees that survive at the end of the projection based on the mortality rate. The models do estimate fractions of individual trees remaining after mortality for the most precise estimates of the benefits.)	Basal Area (The estimated combined basal area of surviving trees at the end of the projection.) ()	Canopy Cover (The estimated combined crown area of surviving trees at the end of the projection. This combined crown area estimate assumes no overlap between tree crowns and represents the maximum area that these trees could possibly cover.) ()	Biomass (The estimated combined biomass of surviving trees at the end of the projection.) (pounds)
9	• 5 Ulmus x notha(Ulmus x notha) trees of 2 inches initial DBH (Diameter at Breast Height). • Planted 0-19 feet and north (0°) of buildings that were built post-1980 with heating and cooling. • Trees are in excellent condition and planted in full sun.	5	41.3	95.1	1.5	14.2	4,680.5	12.5
10	• 5 Strawberry tree(Arbutus unedo) trees of 2 inches initial DBH (Diameter at Breast Height). • Planted 0-19 feet and north (0°) of buildings that were built post-1980 with heating and cooling. • Trees are in excellent condition and planted in full sun.	5	17.6	86.5	1.5	2.6	1,013.8	2.5
11	• 5 Magnolia spp(Magnolia) trees of 2 inches initial DBH (Diameter at Breast Height). • Planted 0-19 feet and south (180°) of buildings that were built post-1980 with heating and cooling. • Trees are in excellent condition and planted in full sun.	5	30.6	54.4	1.5	7.8	2,937.6	7.6
12	• 5 Ttristania spp(Tristania) trees of 2 inches initial DBH (Diameter at Breast Height). • Planted 0-19 feet and south (180°) of buildings that were built post-1980 with heating and cooling. • Trees are in excellent condition and planted in full sun.	5	30.6	69.8	1.5	7.8	1,323.1	14.5

Location			Tree Growth					
Group Identifier	Tree Group Characteristics	Initial Number of Trees	DBH (The estimated DBH at the end of the projection) ()	Height (The estimated tree height at the end of the projection) ()	Surviving Trees (The number of trees that survive at the end of the projection based on the mortality rate. The models do estimate fractions of individual trees remaining after mortality for the most precise estimates of the benefits.)	Basal Area (The estimated combined basal area of surviving trees at the end of the projection.) ()	Canopy Cover (The estimated combined crown area of surviving trees at the end of the projection. This combined crown area estimate assumes no overlap between tree crowns and represents the maximum area that these trees could possibly cover.) ()	Biomass (The estimated combined biomass of surviving trees at the end of the projection.) (pounds)
14	• 5 Wilga; australian willow(Geijera parviflora) trees of 2 inches initial DBH (Diameter at Breast Height). • Planted 0-19 feet and east (90°) of buildings that were built post-1980 with heating and cooling. • Trees are in excellent condition and planted in full sun.	5	18.7	23.8	1.5	2.9	700.7	3.4
15	• 5 Guava crape myrtle(Lagerstroemia calyculata) trees of 2 inches initial DBH (Diameter at Breast Height). • Planted 0-19 feet and east (90°) of buildings that were built post-1980 with heating and cooling. • Trees are in excellent condition and planted in full sun.	5	32.7	31.8	1.5	8.9	1,078.7	8.5
16	• 7 Date Palm spp(Phoenix) trees of 2 inches initial DBH (Diameter at Breast Height). • Planted 0-19 feet and west (270°) of buildings that were built post-1980 with heating and cooling. • Trees are in excellent condition and planted in full sun.	7	18.5	21.5	2.1	4.0	557.2	0.3
17	• 5 Bay spp(Persea) trees of 2 inches initial DBH (Diameter at Breast Height). • Planted 0-19 feet and west (270°) of buildings that were built post-1980 with heating and cooling. • Trees are in excellent condition and planted in full sun.	5	30.6	60.8	1.5	7.8	2,334.3	9.1

Location			Tree Growth					
Group Identifier	**Tree Group Characteristics**	**Initial Number of Trees**	**DBH (The estimated DBH at the end of the projection) ()**	**Height (The estimated tree height at the end of the projection) ()**	**Surviving Trees (The number of trees that survive at the end of the projection based on the mortality rate. The models do estimate fractions of individual trees remaining after mortality for the most precise estimates of the benefits.)**	**Basal Area (The estimated combined basal area of surviving trees at the end of the projection.) ()**	**Canopy Cover (The estimated combined crown area of surviving trees at the end of the projection. This combined crown area estimate assumes no overlap between tree crowns and represents the maximum area that these trees could possibly cover.) ()**	**Biomass (The estimated combined biomass of surviving trees at the end of the projection.) (pounds)**
18	• 5 African sumac(Searsia lancea) trees of 2 inches initial DBH (Diameter at Breast Height). • Planted 0-19 feet and west (270°) of buildings that were built post-1980 with heating and cooling. • Trees are in excellent condition and planted in full sun.	5	18.5	43.1	1.5	2.8	1,008.7	2.3
Total		117			**36**	**157.6**	**42,546.9**	**169.2**

Location			CO_2 (Carbon Dioxide) Benefits			
Group Identifier	**Tree Group Characteristics**	**Initial Number of Trees**	**CO_2 (Carbon Dioxide) Avoided (pounds)**	**CO_2 Avoided ($)**	**CO_2 Sequestered (pounds)**	**CO_2 Sequestered ($)**
1	• 10 Olive spp(Olea) trees of 2 inches initial DBH (Diameter at Breast Height). • Planted 0-19 feet and north (0°) of buildings that were built post-1980 with heating and cooling. • Trees are in excellent condition and planted in full sun.	10	25,201.1	$586.10	36,199.4	$841.89
2	• 10 Chinese pistache(Pistacia chinensis) trees of 2 inches initial DBH (Diameter at Breast Height). • Planted 0-19 feet and north (0°) of buildings that were built post-1980 with heating and cooling. • Trees are in excellent condition and planted in full sun.	10	8,863.5	$206.14	86,232.0	$2,005.49
3	• 10 Sycamore spp(Platanus) trees of 2 inches initial DBH (Diameter at Breast Height). • Planted 0-19 feet and south (180°) of buildings that were built post-1980 with heating and cooling. • Trees are in excellent condition and planted in full sun.	10	-4,765.8	$-110.84	52,463.5	$1,220.14
4	• 10 Quercus acutifolia(Quercus acutifolia) trees of 2 inches initial DBH (Diameter at Breast Height). • Planted 0-19 feet and south (180°) of buildings that were built post-1980 with heating and cooling. • Trees are in excellent condition and planted in full sun.	10	-58,418.2	$-1,358.63	40,076.7	$932.06
5	• 10 Coastal live oak(Quercus agrifolia) trees of 2 inches initial DBH (Diameter at Breast Height). • Planted 0-19 feet and east (90°) of buildings that were built post-1980 with heating and cooling. • Trees are in excellent condition and planted in full sun.	10	-30,167.3	$-701.60	52,614.9	$1,223.66
6	• 10 Chinese elm(Ulmus parvifolia) trees of 2 inches initial DBH (Diameter at Breast Height). • Planted 0-19 feet and east (90°) of buildings that were built post-1980 with heating and cooling. • Trees are in excellent condition and planted in full sun.	10	-4,279.5	$-99.53	193,139.7	$4,491.84
7	• 5 Fern tree(Filicium decipiens) trees of 2 inches initial DBH (Diameter at Breast Height). • Planted 0-19 feet and west (270°) of buildings that were built post-1980 with heating and cooling. • Trees are in excellent condition and planted in full sun.	5	774.3	$18.01	92,835.2	$2,159.06
8	• 5 Ttristania spp(Tristania) trees of 2 inches initial DBH (Diameter at Breast Height). • Planted 0-19 feet and west (270°) of buildings that were built post-1980 with heating and cooling. • Trees are in excellent condition and planted in full sun.	5	-937.1	$-21.79	84,575.5	$1,966.97
9	• 5 Ulmus x notha(Ulmus x notha) trees of 2 inches initial DBH (Diameter at Breast Height). • Planted 0-19 feet and north (0°) of buildings that were built post-1980 with heating and cooling. • Trees are in excellent condition and planted in full sun.	5	7,315.3	$170.13	70,466.7	$1,638.84
10	• 5 Strawberry tree(Arbutus unedo) trees of 2 inches initial DBH (Diameter at Breast Height). • Planted 0-19 feet and north (0°) of buildings that were built post-1980 with heating and cooling. • Trees are in excellent condition and planted in full sun.	5	11,693.9	$271.96	16,226.2	$377.37
11	• 5 Magnolia spp(Magnolia) trees of 2 inches initial DBH (Diameter at Breast Height). • Planted 0-19 feet and south (180°) of buildings that were built post-1980 with heating and cooling. • Trees are in excellent condition and planted in full sun.	5	-4,406.5	$-102.48	44,087.8	$1,025.35

Location			CO_2 (Carbon Dioxide) Benefits			
Group Identifier	**Tree Group Characteristics**	**Initial Number of Trees**	**CO_2 (Carbon Dioxide) Avoided (pounds)**	**CO_2 Avoided ($)**	**CO_2 Sequestered (pounds)**	**CO_2 Sequestered ($)**
12	• 5 Ttristania spp(Tristania) trees of 2 inches initial DBH (Diameter at Breast Height). • Planted 0-19 feet and south (180°) of buildings that were built post-1980 with heating and cooling. • Trees are in excellent condition and planted in full sun.	5	-31,619.0	$-735.36	84,575.5	$1,966.97
14	• 5 Wilga; australian willow(Geijera parviflora) trees of 2 inches initial DBH (Diameter at Breast Height). • Planted 0-19 feet and east (90°) of buildings that were built post-1980 with heating and cooling. • Trees are in excellent condition and planted in full sun.	5	-9,638.1	$-224.15	27,165.7	$631.79
15	• 5 Guava crape myrtle(Lagerstroemia calyculata) trees of 2 inches initial DBH (Diameter at Breast Height). • Planted 0-19 feet and east (90°) of buildings that were built post-1980 with heating and cooling. • Trees are in excellent condition and planted in full sun.	5	-3,476.7	$-80.86	48,179.6	$1,120.51
16	• 7 Date Palm spp(Phoenix) trees of 2 inches initial DBH (Diameter at Breast Height). • Planted 0-19 feet and west (270°) of buildings that were built post-1980 with heating and cooling. • Trees are in excellent condition and planted in full sun.	7	-1,360.1	$-31.63	1,974.8	$45.93
17	• 5 Bay spp(Persea) trees of 2 inches initial DBH (Diameter at Breast Height). • Planted 0-19 feet and west (270°) of buildings that were built post-1980 with heating and cooling. • Trees are in excellent condition and planted in full sun.	5	4,384.4	$101.97	52,799.8	$1,227.96
18	• 5 African sumac(Searsia lancea) trees of 2 inches initial DBH (Diameter at Breast Height). • Planted 0-19 feet and west (270°) of buildings that were built post-1980 with heating and cooling. • Trees are in excellent condition and planted in full sun.	5	-7,670.0	$-178.38	17,438.2	$405.56
Total		117	**-98,505.9**	**$-2,290.95**	**1,001,051.2**	**$23,281.39**

Location			Energy Benefits			
Group Identifier	Tree Group Characteristics	Initial Number of Trees	Electricity Saved (kWh) (Kilowatt-Hours)	Electricity Saved ($)	Fuel Saved (MMBtu) (Millions of British Thermal Units)	Fuel Saved ($)
1	• 10 Olive spp(Olea) trees of 2 inches initial DBH (Diameter at Breast Height). • Planted 0-19 feet and north (0°) of buildings that were built post-1980 with heating and cooling. • Trees are in excellent condition and planted in full sun.	10	21,352.5	$4,370.86	106.1	$1,372.90
2	• 10 Chinese pistache(Pistacia chinensis) trees of 2 inches initial DBH (Diameter at Breast Height). • Planted 0-19 feet and north (0°) of buildings that were built post-1980 with heating and cooling. • Trees are in excellent condition and planted in full sun.	10	9,051.2	$1,852.78	29.1	$376.63
3	• 10 Sycamore spp(Platanus) trees of 2 inches initial DBH (Diameter at Breast Height). • Planted 0-19 feet and south (180°) of buildings that were built post-1980 with heating and cooling. • Trees are in excellent condition and planted in full sun.	10	23,722.1	$4,855.91	-167.9	$-2,172.83
4	• 10 Quercus acutifolia(Quercus acutifolia) trees of 2 inches initial DBH (Diameter at Breast Height). • Planted 0-19 feet and south (180°) of buildings that were built post-1980 with heating and cooling. • Trees are in excellent condition and planted in full sun.	10	6,925.8	$1,417.71	-546.5	$-7,071.08
5	• 10 Coastal live oak(Quercus agrifolia) trees of 2 inches initial DBH (Diameter at Breast Height). • Planted 0-19 feet and east (90°) of buildings that were built post-1980 with heating and cooling. • Trees are in excellent condition and planted in full sun.	10	9,916.8	$2,029.97	-316.0	$-4,088.49
6	• 10 Chinese elm(Ulmus parvifolia) trees of 2 inches initial DBH (Diameter at Breast Height). • Planted 0-19 feet and east (90°) of buildings that were built post-1980 with heating and cooling. • Trees are in excellent condition and planted in full sun.	10	19,339.1	$3,958.72	-140.3	$-1,815.88
7	• 5 Fern tree(Filicium decipiens) trees of 2 inches initial DBH (Diameter at Breast Height). • Planted 0-19 feet and west (270°) of buildings that were built post-1980 with heating and cooling. • Trees are in excellent condition and planted in full sun.	5	13,971.0	$2,859.87	-67.7	$-875.47
8	• 5 Ttristania spp(Tristania) trees of 2 inches initial DBH (Diameter at Breast Height). • Planted 0-19 feet and west (270°) of buildings that were built post-1980 with heating and cooling. • Trees are in excellent condition and planted in full sun.	5	12,671.0	$2,593.75	-75.7	$-979.05
9	• 5 Ulmus x notha(Ulmus x notha) trees of 2 inches initial DBH (Diameter at Breast Height). • Planted 0-19 feet and north (0°) of buildings that were built post-1980 with heating and cooling. • Trees are in excellent condition and planted in full sun.	5	7,463.4	$1,527.76	24.1	$311.31
10	• 5 Strawberry tree(Arbutus unedo) trees of 2 inches initial DBH (Diameter at Breast Height). • Planted 0-19 feet and north (0°) of buildings that were built post-1980 with heating and cooling. • Trees are in excellent condition and planted in full sun.	5	9,912.5	$2,029.09	49.2	$636.75
11	• 5 Magnolia spp(Magnolia) trees of 2 inches initial DBH (Diameter at Breast Height). • Planted 0-19 feet and south (180°) of buildings that were built post-1980 with heating and cooling. • Trees are in excellent condition and planted in full sun.	5	9,049.2	$1,852.37	-86.6	$-1,121.03

Location			Energy Benefits			
Group Identifier	**Tree Group Characteristics**	**Initial Number of Trees**	**Electricity Saved (kWh) (Kilowatt-Hours)**	**Electricity Saved ($)**	**Fuel Saved (MMBtu) (Millions of British Thermal Units)**	**Fuel Saved ($)**
12	• 5 Ttristania spp(Tristania) trees of 2 inches initial DBH (Diameter at Breast Height). • Planted 0-19 feet and south (180°) of buildings that were built post-1980 with heating and cooling. • Trees are in excellent condition and planted in full sun.	5	941.3	$192.69	-280.8	$-3,633.77
14	• 5 Wilga; australian willow(Geijera parviflora) trees of 2 inches initial DBH (Diameter at Breast Height). • Planted 0-19 feet and east (90°) of buildings that were built post-1980 with heating and cooling. • Trees are in excellent condition and planted in full sun.	5	-268.4	$-54.95	-82.6	$-1,069.37
15	• 5 Guava crape myrtle(Lagerstroemia calyculata) trees of 2 inches initial DBH (Diameter at Breast Height). • Planted 0-19 feet and east (90°) of buildings that were built post-1980 with heating and cooling. • Trees are in excellent condition and planted in full sun.	5	2,861.9	$585.82	-45.6	$-589.66
16	• 7 Date Palm spp(Phoenix) trees of 2 inches initial DBH (Diameter at Breast Height). • Planted 0-19 feet and west (270°) of buildings that were built post-1980 with heating and cooling. • Trees are in excellent condition and planted in full sun.	7	3,268.9	$669.14	-29.3	$-378.81
17	• 5 Bay spp(Persea) trees of 2 inches initial DBH (Diameter at Breast Height). • Planted 0-19 feet and west (270°) of buildings that were built post-1980 with heating and cooling. • Trees are in excellent condition and planted in full sun.	5	14,606.1	$2,989.87	-39.6	$-511.77
18	• 5 African sumac(Searsia lancea) trees of 2 inches initial DBH (Diameter at Breast Height). • Planted 0-19 feet and west (270°) of buildings that were built post-1980 with heating and cooling. • Trees are in excellent condition and planted in full sun.	5	5,915.4	$1,210.88	-98.4	$-1,273.41
Total		117	**170,699.7**	**$34,942.23**	**-1,768.4**	**$-22,883.03**

Location			Hydrological Benefits				
Group Identifier	Tree Group Characteristics	Initial Number of Trees	Rainfall Interception (gallons)	Evaporation (gallons)	Transpiration (gallons)	Runoff Avoided (gallons)	Runoff Avoided ($)
1	• 10 Olive spp(Olea) trees of 2 inches initial DBH (Diameter at Breast Height). • Planted 0-19 feet and north (0°) of buildings that were built post-1980 with heating and cooling. • Trees are in excellent condition and planted in full sun.	10	54,732.4	54,732.3	296,307.0	20,576.4	$183.87
2	• 10 Chinese pistache(Pistacia chinensis) trees of 2 inches initial DBH (Diameter at Breast Height). • Planted 0-19 feet and north (0°) of buildings that were built post-1980 with heating and cooling. • Trees are in excellent condition and planted in full sun.	10	112,077.6	112,077.3	606,758.6	42,135.0	$376.52
3	• 10 Sycamore spp(Platanus) trees of 2 inches initial DBH (Diameter at Breast Height). • Planted 0-19 feet and south (180°) of buildings that were built post-1980 with heating and cooling. • Trees are in excellent condition and planted in full sun.	10	133,270.0	133,269.6	721,488.4	50,102.2	$447.71
4	• 10 Quercus acutifolia(Quercus acutifolia) trees of 2 inches initial DBH (Diameter at Breast Height). • Planted 0-19 feet and south (180°) of buildings that were built post-1980 with heating and cooling. • Trees are in excellent condition and planted in full sun.	10	109,171.6	109,171.4	591,026.5	41,042.5	$366.76
5	• 10 Coastal live oak(Quercus agrifolia) trees of 2 inches initial DBH (Diameter at Breast Height). • Planted 0-19 feet and east (90°) of buildings that were built post-1980 with heating and cooling. • Trees are in excellent condition and planted in full sun.	10	86,164.0	86,163.7	466,469.0	32,392.9	$289.46
6	• 10 Chinese elm(Ulmus parvifolia) trees of 2 inches initial DBH (Diameter at Breast Height). • Planted 0-19 feet and east (90°) of buildings that were built post-1980 with heating and cooling. • Trees are in excellent condition and planted in full sun.	10	164,642.0	164,641.6	891,328.2	61,896.3	$553.11
7	• 5 Fern tree(Filicium decipiens) trees of 2 inches initial DBH (Diameter at Breast Height). • Planted 0-19 feet and west (270°) of buildings that were built post-1980 with heating and cooling. • Trees are in excellent condition and planted in full sun.	5	43,887.8	43,887.7	237,596.8	16,499.4	$147.44
8	• 5 Ttristania spp(Tristania) trees of 2 inches initial DBH (Diameter at Breast Height). • Planted 0-19 feet and west (270°) of buildings that were built post-1980 with heating and cooling. • Trees are in excellent condition and planted in full sun.	5	39,598.8	39,598.7	214,377.3	14,887.0	$133.03
9	• 5 Ulmus x notha(Ulmus x notha) trees of 2 inches initial DBH (Diameter at Breast Height). • Planted 0-19 feet and north (0°) of buildings that were built post-1980 with heating and cooling. • Trees are in excellent condition and planted in full sun.	5	101,443.5	101,443.2	549,188.3	38,137.2	$340.79
10	• 5 Strawberry tree(Arbutus unedo) trees of 2 inches initial DBH (Diameter at Breast Height). • Planted 0-19 feet and north (0°) of buildings that were built post-1980 with heating and cooling. • Trees are in excellent condition and planted in full sun.	5	38,318.7	38,318.6	207,447.5	14,405.7	$128.73
11	• 5 Magnolia spp(Magnolia) trees of 2 inches initial DBH (Diameter at Breast Height). • Planted 0-19 feet and south (180°) of buildings that were built post-1980 with heating and cooling. • Trees are in excellent condition and planted in full sun.	5	71,006.5	71,006.3	384,410.5	26,694.5	$238.54

Location			Hydrological Benefits				
Group Identifier	**Tree Group Characteristics**	**Initial Number of Trees**	**Rainfall Interception (gallons)**	**Evaporation (gallons)**	**Transpiration (gallons)**	**Runoff Avoided (gallons)**	**Runoff Avoided ($)**
12	• 5 Ttristania spp(Tristania) trees of 2 inches initial DBH (Diameter at Breast Height). • Planted 0-19 feet and south (180°) of buildings that were built post-1980 with heating and cooling. • Trees are in excellent condition and planted in full sun.	5	39,598.8	39,598.7	214,377.3	14,887.0	$133.03
14	• 5 Wilga; australian willow(Geijera parviflora) trees of 2 inches initial DBH (Diameter at Breast Height). • Planted 0-19 feet and east (90°) of buildings that were built post-1980 with heating and cooling. • Trees are in excellent condition and planted in full sun.	5	33,326.5	33,326.4	180,420.7	12,528.9	$111.96
15	• 5 Guava crape myrtle(Lagerstroemia calyculata) trees of 2 inches initial DBH (Diameter at Breast Height). • Planted 0-19 feet and east (90°) of buildings that were built post-1980 with heating and cooling. • Trees are in excellent condition and planted in full sun.	5	29,030.8	29,030.8	157,165.3	10,914.0	$97.53
16	• 7 Date Palm spp(Phoenix) trees of 2 inches initial DBH (Diameter at Breast Height). • Planted 0-19 feet and west (270°) of buildings that were built post-1980 with heating and cooling. • Trees are in excellent condition and planted in full sun.	7	22,762.7	22,762.6	123,231.0	8,557.5	$76.47
17	• 5 Bay spp(Persea) trees of 2 inches initial DBH (Diameter at Breast Height). • Planted 0-19 feet and west (270°) of buildings that were built post-1980 with heating and cooling. • Trees are in excellent condition and planted in full sun.	5	61,649.3	61,649.2	333,753.1	23,176.8	$207.11
18	• 5 African sumac(Searsia lancea) trees of 2 inches initial DBH (Diameter at Breast Height). • Planted 0-19 feet and west (270°) of buildings that were built post-1980 with heating and cooling. • Trees are in excellent condition and planted in full sun.	5	41,750.8	41,750.7	226,027.6	15,696.0	$140.26
Total		117	**1,182,431.7**	**1,182,428.7**	**6,401,373.0**	**444,529.3**	**$3,972.31**

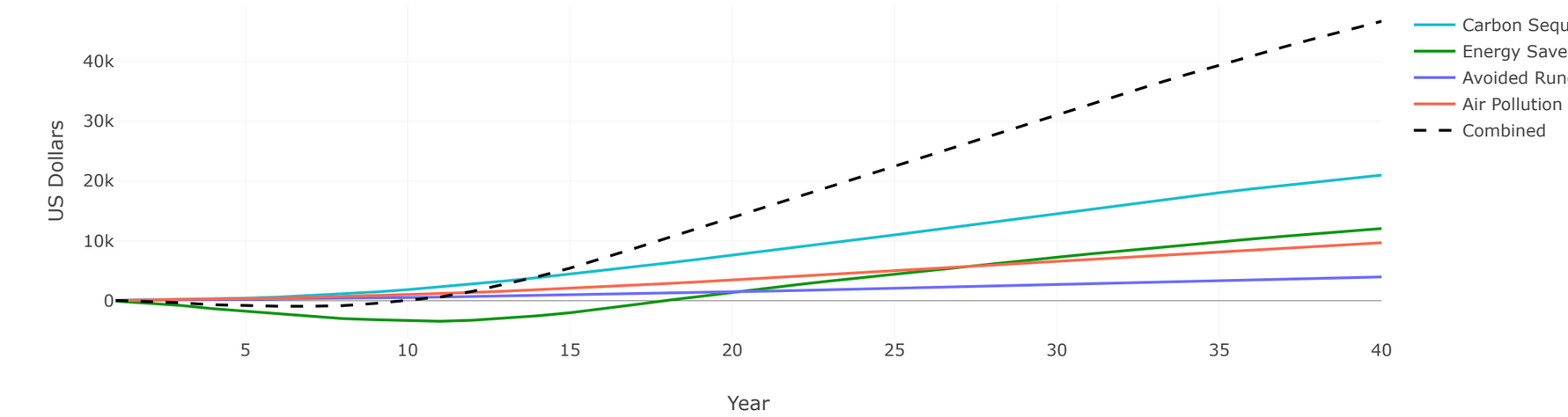
Location			Air Benefits										
Group Identifier	Tree Group Characteristics	Initial Number of Trees	O_3 (Ozone) Removed (pounds)	NO_2 (Nitrogen Dioxide) Avoided (pounds)	NO_2 (Nitrogen Dioxide) Removed (pounds)	SO_2 (Sulfur Dioxide) Avoided (pounds)	SO_2 (Sulfur Dioxide) Removed (pounds)	VOC (Volatile Organic Compound) Avoided (pounds)	$PM_{2.5}$ (Particulate matter smaller than 2.5 micrometers in diameter) Avoided (pounds)	$PM_{2.5}$ (Particulate matter smaller than 2.5 micrometers in diameter) Removed (pounds)	Avoided Value (Values for avoided pollutants) ($)	Removal Value (Values for removed pollutants) ($)
1	• 10 Olive spp(Olea) trees of 2 inches initial DBH (Diameter at Breast Height). • Planted 0-19 feet and north (0°) of buildings that were built post-1980 with heating and cooling. • Trees are in excellent condition and planted in full sun.	10	82.15	1.81	21.12	6.38	1.43	11.27	7.04	1.15	$47.47	$575.81
2	• 10 Chinese pistache(Pistacia chinensis) trees of 2 inches initial DBH (Diameter at Breast Height). • Planted 0-19 feet and north (0°) of buildings that were built post-1980 with heating and cooling. • Trees are in excellent condition and planted in full sun.	10	123.09	0.64	27.39	2.24	2.00	4.69	2.97	0.88	$19.42	$695.45
3	• 10 Sycamore spp(Platanus) trees of 2 inches initial DBH (Diameter at Breast Height). • Planted 0-19 feet and south (180°) of buildings that were built post-1980 with heating and cooling. • Trees are in excellent condition and planted in full sun.	10	187.98	-0.34	44.58	-1.20	2.97	10.98	7.47	2.15	$40.10	$1,190.00
4	• 10 Quercus acutifolia(Quercus acutifolia) trees of 2 inches initial DBH (Diameter at Breast Height). • Planted 0-19 feet and south (180°) of buildings that were built post-1980 with heating and cooling. • Trees are in excellent condition and planted in full sun.	10	160.97	-4.20	41.09	-14.78	2.80	0.52	1.58	2.10	$-10.30	$1,101.24

Location			Air Benefits										
Group Identifier	Tree Group Characteristics	Initial Number of Trees	O_3 (Ozone) Removed (pounds)	NO_2 (Nitrogen Dioxide) Avoided (pounds)	NO_2 (Nitrogen Dioxide) Removed (pounds)	SO_2 (Sulfur Dioxide) Avoided (pounds)	SO_2 (Sulfur Dioxide) Removed (pounds)	VOC (Volatile Organic Compound) Avoided (pounds)	$PM_{2.5}$ (Particulate matter smaller than 2.5 micrometers in diameter) Avoided (pounds)	$PM_{2.5}$ (Particulate matter smaller than 2.5 micrometers in diameter) Removed (pounds)	Avoided Value (Values for avoided pollutants) ($)	Removal Value (Values for removed pollutants) ($)
5	• 10 Coastal live oak(Quercus agrifolia) trees of 2 inches initial DBH (Diameter at Breast Height). • Planted 0-19 feet and east (90°) of buildings that were built post-1980 with heating and cooling. • Trees are in excellent condition and planted in full sun.	10	126.87	-2.17	32.41	-7.63	2.21	3.26	2.82	1.68	$5.89	$872.67
6	• 10 Chinese elm(Ulmus parvifolia) trees of 2 inches initial DBH (Diameter at Breast Height). • Planted 0-19 feet and east (90°) of buildings that were built post-1980 with heating and cooling. • Trees are in excellent condition and planted in full sun.	10	188.79	-0.31	42.54	-1.08	3.05	8.93	6.09	1.51	$32.54	$1,091.84
7	• 5 Fern tree(Filicium decipiens) trees of 2 inches initial DBH (Diameter at Breast Height). • Planted 0-19 feet and west (270°) of buildings that were built post-1980 with heating and cooling. • Trees are in excellent condition and planted in full sun.	5	66.57	0.06	17.12	0.20	1.16	6.63	4.44	0.92	$25.00	$464.47
8	• 5 Ttristania spp(Tristania) trees of 2 inches initial DBH (Diameter at Breast Height). • Planted 0-19 feet and west (270°) of buildings that were built post-1980 with heating and cooling. • Trees are in excellent condition and planted in full sun.	5	62.10	-0.07	16.19	-0.24	1.07	5.94	4.01	0.97	$22.04	$453.58

Location			Air Benefits										
Group Identifier	Tree Group Characteristics	Initial Number of Trees	O_3 (Ozone) Removed (pounds)	NO_2 (Nitrogen Dioxide) Avoided (pounds)	NO_2 (Nitrogen Dioxide) Removed (pounds)	SO_2 (Sulfur Dioxide) Avoided (pounds)	SO_2 (Sulfur Dioxide) Removed (pounds)	VOC (Volatile Organic Compound) Avoided (pounds)	$PM_{2.5}$ (Particulate matter smaller than 2.5 micrometers in diameter) Avoided (pounds)	$PM_{2.5}$ (Particulate matter smaller than 2.5 micrometers in diameter) Removed (pounds)	Avoided Value (Values for avoided pollutants) ($)	Removal Value (Values for removed pollutants) ($)
9	• 5 Ulmus x notha(Ulmus x notha) trees of 2 inches initial DBH (Diameter at Breast Height). • Planted 0-19 feet and north (0°) of buildings that were built post-1980 with heating and cooling. • Trees are in excellent condition and planted in full sun.	5	104.87	0.53	23.15	1.85	1.71	3.87	2.45	0.74	$16.02	$591.29
10	• 5 Strawberry tree(Arbutus unedo) trees of 2 inches initial DBH (Diameter at Breast Height). • Planted 0-19 feet and north (0°) of buildings that were built post-1980 with heating and cooling. • Trees are in excellent condition and planted in full sun.	5	44.37	0.84	10.63	2.96	0.79	5.23	3.27	0.37	$22.04	$265.98
11	• 5 Magnolia spp(Magnolia) trees of 2 inches initial DBH (Diameter at Breast Height). • Planted 0-19 feet and south (180°) of buildings that were built post-1980 with heating and cooling. • Trees are in excellent condition and planted in full sun.	5	83.55	-0.32	18.92	-1.11	1.35	4.06	2.82	0.68	$14.30	$485.20
12	• 5 Ttristania spp(Tristania) trees of 2 inches initial DBH (Diameter at Breast Height). • Planted 0-19 feet and south (180°) of buildings that were built post-1980 with heating and cooling. • Trees are in excellent condition and planted in full sun.	5	62.10	-2.27	16.19	-8.00	1.07	-1.04	-0.04	0.97	$-10.54	$453.58

Location			Air Benefits										
Group Identifier	Tree Group Characteristics	Initial Number of Trees	O_3 (Ozone) Removed (pounds)	NO_2 (Nitrogen Dioxide) Avoided (pounds)	NO_2 (Nitrogen Dioxide) Removed (pounds)	SO_2 (Sulfur Dioxide) Avoided (pounds)	SO_2 (Sulfur Dioxide) Removed (pounds)	VOC (Volatile Organic Compound) Avoided (pounds)	$PM_{2.5}$ (Particulate matter smaller than 2.5 micrometers in diameter) Avoided (pounds)	$PM_{2.5}$ (Particulate matter smaller than 2.5 micrometers in diameter) Removed (pounds)	Avoided Value (Values for avoided pollutants) ($)	Removal Value (Values for removed pollutants) ($)
14	• 5 Wilga; australian willow(Geijera parviflora) trees of 2 inches initial DBH (Diameter at Breast Height). • Planted 0-19 feet and east (90°) of buildings that were built post-1980 with heating and cooling. • Trees are in excellent condition and planted in full sun.	5	39.91	-0.69	9.65	-2.44	0.71	-0.58	-0.19	0.35	$-4.19	$243.05
15	• 5 Guava crape myrtle(Lagerstroemia calyculata) trees of 2 inches initial DBH (Diameter at Breast Height). • Planted 0-19 feet and east (90°) of buildings that were built post-1980 with heating and cooling. • Trees are in excellent condition and planted in full sun.	5	32.86	-0.25	7.37	-0.88	0.53	1.19	0.87	0.25	$3.72	$187.71
16	• 7 Date Palm spp(Phoenix) trees of 2 inches initial DBH (Diameter at Breast Height). • Planted 0-19 feet and west (270°) of buildings that were built post-1980 with heating and cooling. • Trees are in excellent condition and planted in full sun.	7	17.86	-0.10	3.87	-0.34	0.33	1.48	1.02	0.07	$5.25	$93.25
17	• 5 Bay spp(Persea) trees of 2 inches initial DBH (Diameter at Breast Height). • Planted 0-19 feet and west (270°) of buildings that were built post-1980 with heating and cooling. • Trees are in excellent condition and planted in full sun.	5	74.21	0.32	16.89	1.11	1.19	7.10	4.68	0.63	$27.51	$434.57

Location			Air Benefits										
Group Identifier	**Tree Group Characteristics**	**Initial Number of Trees**	**O_3 (Ozone) Removed (pounds)**	**NO_2 (Nitrogen Dioxide) Avoided (pounds)**	**NO_2 (Nitrogen Dioxide) Removed (pounds)**	**SO_2 (Sulfur Dioxide) Avoided (pounds)**	**SO_2 (Sulfur Dioxide) Removed (pounds)**	**VOC (Volatile Organic Compound) Avoided (pounds)**	**$PM_{2.5}$ (Particulate matter smaller than 2.5 micrometers in diameter) Avoided (pounds)**	**$PM_{2.5}$ (Particulate matter smaller than 2.5 micrometers in diameter) Removed (pounds)**	**Avoided Value (Values for avoided pollutants) ($)**	**Removal Value (Values for removed pollutants) ($)**
18	• 5 African sumac(Searsia lancea) trees of 2 inches initial DBH (Diameter at Breast Height). • Planted 0-19 feet and west (270°) of buildings that were built post-1980 with heating and cooling. • Trees are in excellent condition and planted in full sun.	5	39.97	-0.55	9.12	-1.94	0.73	2.43	1.79	0.23	$7.50	$222.01
Total		117	**1,498.21**	**-7.07**	**358.23**	**-24.89**	**25.11**	**75.95**	**53.10**	**15.65**	**$263.75**	**$9,421.68**



Mortality is modeled as a fractional (not whole) tree estimate and may not align year-over-year.
Sequestration does not account for net differences like decay.
Tree canopy cover estimate assumes no overlap between crowns.

Application v2.7.0, powered by engine v0.15.1 (APIv3) and database v12.0.77.

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ATTACHMENT B
GHG EMISSIONS REPORT

GREENHOUSE GAS TECHNICAL REPORT

Introduction

This technical report examines the direct and indirect impacts of the Proposed Carson Triangle Project at 21212 Avalon Boulevard in the City of Carson related to greenhouse gas (GHG) emissions and global climate change by disclosing GHG emissions generation and by addressing the Project's consistency with applicable GHG emission reduction plans, policies, and regulations. Calculation worksheets and documentation are included in the Technical Appendix to this analysis.

Environmental Setting

Global climate change refers to changes in average climatic conditions on Earth as a whole, including changes in temperature, wind patterns, precipitation, and storms. Global warming, a related concept, is the observed increase in average temperature of Earth's surface and atmosphere. One cause of global warming is an increase of GHG emissions in the atmosphere. GHG emissions are those compounds in Earth's atmosphere that play a critical role in determining Earth's surface temperature.

Earth's natural warming process is known as the "greenhouse effect" because Earth and the atmosphere surrounding it are like a greenhouse with glass panes that allow solar radiation (sunlight) into Earth's atmosphere but prevents radiative heat from escaping, thus warming Earth's atmosphere. Some levels of GHG emissions keep the average surface temperature of Earth close to a hospitable 60 degrees Fahrenheit. However, it is believed that excessive concentrations of anthropogenic GHG emissions in the atmosphere can result in increased global mean temperatures, with associated adverse climatic and ecological consequences.[1]

Scientists studying the rapid rise in global temperatures have determined that human activity has resulted in increased emissions of GHGs, primarily from the burning of fossil fuels (from motor vehicle travel, electricity generation, consumption of natural gas, industrial activity, manufacturing), deforestation, agricultural activity, and the decomposition of solid waste. Scientists refer to the global warming context of the past century as the "enhanced greenhouse effect" to distinguish it from the natural greenhouse effect.[2]

Global GHG emissions due to human activities have grown since pre-industrial times. As reported by the United States Environmental Protection Agency (USEPA), global carbon emissions from fossil fuels increased by over 16 times between 1900 and 2008 and by about 1.5 times between 1990 and 2008. In addition, in the Global Carbon Budget 2014 report, published in September 2014, atmospheric carbon dioxide (CO_2) concentrations in 2013 were found to be 43 percent above the concentration at the start of the Industrial Revolution, and the present concentration is the highest

1 Intergovernmental Panel on Climate Change, 2014: Climate Change 2014: Synthesis Report. Contribution of Working Groups I, II and III to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change [Core Writing Team, R.K. Pachauri and L.A. Meyer (eds.)].

2 Center for Climate and Energy Solutions, Climate Change 101: Understanding and Responding to Global Climate Change.

during at least the last 800,000 years.[3] Global increases in CO_2 concentrations are due primarily to fossil fuel use, with land use change providing another significant but smaller contribution. Regarding emissions of non-CO_2 GHG, these have also increased significantly since 1990. In particular, studies have concluded that it is very likely that the observed increase in methane (CH_4) concentration is predominantly due to agriculture and fossil fuel use.[4]

In August 2007, international climate talks held under the auspices of the United Nations Framework Convention on Climate Change (UNFCCC) led to the official recognition by the participating nations that global emissions of GHG must be reduced. According to the "Ad Hoc Working Group on Further Commitments of Annex I Parties under the Kyoto Protocol," avoiding the most catastrophic events forecast by the United Nations Intergovernmental Panel on Climate Change (IPCC) would entail emissions reductions by industrialized countries in the range of 25 to 40 percent below 1990 levels. Because of the Kyoto Protocol's Clean Development Mechanism, which gives industrialized countries credit for financing emission-reducing projects in developing countries, such an emissions goal in industrialized countries could ultimately spur efforts to cut emissions in developing countries as well.[5]

With regard to the adverse effects of global warming, as reported by the Southern California Association of Governments (SCAG), "Global warming poses a serious threat to the economic well-being, public health, and natural environment in southern California and beyond. The potential adverse impacts of global warming include, among others, a reduction in the quantity and quality of water supply, a rise in sea level, damage to marine and other ecosystems, and an increase in the incidences of infectious diseases. Over the past few decades, energy intensity of the national and state economy has been declining due to the shift to a more service-oriented economy. California ranked fifth lowest among the states in CO_2 emissions from fossil fuel consumption per unit of Gross State Product. However, in terms of total CO_2 emissions, California is second only to Texas in the nation and is the 12th largest source of climate change emissions in the world, exceeding most nations. The SCAG region, with close to half of the state's population and economic activities, is also a major contributor to the global warming problem."

GHG Emissions Background. GHG emissions include CO_2, CH_4, nitrous oxide (N_2O), hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), sulfur hexafluoride (SF_6), and nitrogen trifluoride (NF_3).[6] Carbon dioxide is the most abundant GHG. Other GHG emissions are less abundant but have higher global warming potential than CO_2. Thus, emissions of other GHG emissions are frequently expressed in the equivalent mass of CO_2, denoted as CO_2e. Forest fires, decomposition, industrial processes, landfills, and consumption of fossil fuels for power generation, transportation, heating, and cooking are the primary sources of GHG emissions. A general description of the GHG emissions is provided in Table 1.

3 C. Le Quéré, et al., Global Carbon Budget 2014, (Earth System Science Data, 2015, doi:10.5194/essd–7–47–2015).

4 USEPA, Atmospheric Concentrations of Greenhouse Gas, updated June 2015.

5 United Nations Framework Convention on Climate Change, Press Release—Vienna UN Conference Shows Consensus on Key Building Blocks for Effective International Response to Climate Change, August 31, 2007

6 As defined by California Assembly Bill (AB) 32 and Senate Bill (SB) 104.

Table 1
Description of Identified GHG Emissions[a]

Greenhouse Gas	General Description
Carbon Dioxide (CO_2)	An odorless, colorless GHG, which has both natural and anthropocentric sources. Natural sources include the following: decomposition of dead organic matter; respiration of bacteria, plants, animals, and fungus; evaporation from oceans; and volcanic outgassing. Anthropogenic (human caused) sources of CO_2 are burning coal, oil, natural gas, and wood.
Methane (CH_4)	A flammable gas and is the main component of natural gas. When one molecule of CH_4 is burned in the presence of oxygen, one molecule of CO_2 and two molecules of water are released. A natural source of CH_4 is the anaerobic decay of organic matter. Geological deposits, known as natural gas fields, also contain CH_4, which is extracted for fuel. Other sources are from landfills, fermentation of manure, and cattle.
Nitrous Oxide (N_2O)	A colorless GHG. High concentrations can cause dizziness, euphoria, and sometimes slight hallucinations. N_2O is produced by microbial processes in soil and water, including those reactions which occur in fertilizer containing nitrogen. In addition to agricultural sources, some industrial processes (fossil fuel-fired power plants, nylon production, nitric acid production, and vehicle emissions) also contribute to its atmospheric load. It is used in rocket engines, racecars, and as an aerosol spray propellant.
Hydrofluorocarbons (HFCs)	Chlorofluorocarbons (CFCs) are gases formed synthetically by replacing all hydrogen atoms in CH_4 or ethane (C_2H_6) with chlorine and/or fluorine atoms. CFCs are non-toxic, non-flammable, insoluble, and chemically unreactive in the troposphere (the level of air at Earth's surface). CFCs were first synthesized in 1928 for use as refrigerants, aerosol propellants, and cleaning solvents. Because they destroy stratospheric ozone, the production of CFCs was stopped as required by the Montreal Protocol in 1987. HFCs are synthetic man-made chemicals that are used as a substitute for CFCs as refrigerants. HFCs deplete stratospheric ozone, but to a much lesser extent than CFCs.
Perfluorocarbons (PFCs)	PFCs have stable molecular structures and do not break down through the chemical processes in the lower atmosphere. High-energy ultraviolet rays about 60 kilometers above Earth's surface destroy the compounds. PFCs have very long lifetimes, between 10,000 and 50,000 years. Two common PFCs are tetrafluoromethane and hexafluoroethane. The two main sources of PFCs are primary aluminum production and semi-conductor manufacturing.
Sulfur Hexafluoride (SF_6)	An inorganic, odorless, colorless, non-toxic, and non-flammable gas. SF_6 is used for insulation in electric power transmission and distribution equipment, in the magnesium industry, in semi-conductor manufacturing, and as a tracer gas for leak detection.
Nitrogen Trifluoride (NF_3)	An inorganic, non-toxic, odorless, non-flammable gas. NF_3 is used in the manufacture of semi-conductors, as an oxidizer of high-energy fuels, for the preparation of tetrafluorohydrazine, as an etchant gas in the electronic industry, and as a fluorine source in high power chemical lasers.

GHG emissions identified in this table are ones identified in the Kyoto Protocol and other synthetic gases recently added to the IPCC's Fifth Assessment Report.
Source: Association of Environmental Professionals, Alternative Approaches to Analyze Greenhouse Gas Emissions and Global Climate Change in CEQA Documents, Final, June 29, 2007; Environmental Protection Agency, Acute Exposure Guideline Levels (AEGLs) for Nitrogen Trifluoride; January 2009.

Global Warming Potential (GWP) is one type of simplified index based upon radiative properties used to estimate the potential future impacts of emissions of different gases upon the climate system. The GWP is based on several factors, including the radiative efficiency (heat-absorbing ability) of each gas relative to that of CO_2, as well as the decay rate of each gas (the amount removed from the

atmosphere over a given number of years) relative to that of CO_2. The higher the GWP, the more that a given gas warms the Earth compared to CO_2 over that period. As shown in Table 2, the atmospheric lifetime and GWP of selected gases ranges from 1 to 22,800.[7]

Table 2
Atmospheric Lifetimes and Global Warming Potential

Gas	Atmospheric Lifetime (years)	Global Warming Potential (100-year time horizon)
Carbon Dioxide (CO_2)	50–200	1
Methane (CH_4)	12 (+/-3)	25
Nitrous Oxide (N_2O)	114	298
HFC-23: Fluoroform (CHF_3)	270	14,800
HFC-134a: 1,1,1,2-Tetrafluoroethane (CH_2FCF_3)	14	1,430
HFC-152a: 1,1-Difluoroethane ($C_2H_4F_2$)	1.4	124
PFC-14: Tetrafluoromethane (CF_4)	50,000	7,390
PFC-116: Hexafluoroethane (C_2F_6)	10,000	12,200
Sulfur Hexafluoride (SF_6)	3,200	22,800
Nitrogen Trifluoride (NF_3)	740	17,200
Source: IPCC, Climate Change 2007: Working Group I: The Physical Science Basis, Direct Global Warming Potentials		

Projected Impacts of Global Warming in California. 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 in, for example, 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 eliminated. Nonetheless, the IPCC's Fifth Assessment Report, Summary for Policy Makers 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 greenhouse gas concentrations and other anthropogenic forces together."[8] A report from the National Academy of Sciences 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.[9]

According to the California Air Resources Board (CARB), 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 large forest fires; more drought years; increased erosion of

7 Atmospheric lifetime is defined as the time required to turn over the global Atmospheric burden. Source: Intergovernmental Panel on Climate Change, IPCC Third Assessment Report: Climate Change 2001 (TAR), Chapter 4: Atmospheric Chemistry and Greenhouse Gases, 2001, p. 247.

8 Intergovernmental Panel on Climate Change, Fifth Assessment Report, Summary for Policy Makers, page 5, 2013, http://ipcc.ch/report/ar5/syr/. Accessed November 2023.

9 Anderegg, William R. L., J.W. Prall, J. Harold, S.H., Schneider, Expert Credibility in Climate Change, Proceedings of the National Academy of Sciences of the United States of America. 2010;107:12107-12109.

California's coastlines and sea water intrusion into the Sacramento and San Joaquin Deltas and associated levee systems; and increased pest infestation. Below is a summary of some of the potential effects that could be experienced in California because of global warming and climate change.

Air Quality. Higher temperatures, conducive to air pollution formation, could worsen air quality in California. Climate change may increase the concentration of ground-level ozone, but the magnitude of the effect and, therefore, its indirect effects, are uncertain. If higher temperatures are accompanied by drier conditions, the potential for large wildfires could increase, which, in turn, would exacerbate air quality. 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.[10] However, if higher temperatures are accompanied by wetter, rather than drier conditions, the rains would temporarily clear the air of particulate pollution and reduce the incidence of large wildfires, thus ameliorating the pollution associated with wildfires.

In 2009, the California Natural Resources Agency (CNRA) published the *California Climate Adaptation Strategy* as a response to the Governor's Executive Order S-13-2008.[11] The CNRA report lists specific recommendations for state and local agencies to best adapt to the anticipated risks posed by a changing climate. In accordance with the *California Climate Adaptation Strategy*, the California Energy Commission (CEC) was directed to develop a website on climate change scenarios and impacts that would be beneficial for local decision makers.[12] The website, known as Cal-Adapt, became operational in 2011[13] and provides 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, "[c]onsiderable 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."[14] For example, some studies identify little change in total annual precipitation in projections for California while others show significantly more precipitation.[15] Warmer, wetter winters would increase the amount of runoff available for groundwater recharge; however, this additional runoff

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10 California Environmental Protection Agency, Preparing California for Extreme Heat: Guidance and Recommendations, October 2013, https://www.cdph.ca.gov/Programs/OHE/CDPH%20Document%20Library/CCHEP-General/CDPH-EPA-2013-Preparing-CA-for-Extreme-Heat_ADA.pdf. Accessed November 2023.

11 California Natural Resources Agency, Climate Action Team, 2009 California Climate Adaptation Strategy: A Report to the Governor of the State of California in Response to Executive Order S-13-2008, 2009.

12 California Natural Resources Agency, Climate Action Team, 2009 California Climate Adaptation Strategy: A Report to the Governor of the State of California in Response to Executive Order S-13-2008, 2009.

13 The Cal-Adapt website address is: http://cal-adapt.org.

14 Pacific Institute for Studies in Development, Environment and Security, Climate Change and California Water Resources: A Survey and Summary of the Literature, July 2003, page 5, http://www.pacinst.org/reports/climate_change_and_california_water_resources.pdf. Accessed November 2023.

15 Pacific Institute for Studies in Development, Environment and Security, Climate Change and California Water Resources: A Survey and Summary of the Literature, July 2003, http://www.pacinst.org/reports/climate_change_and_california_water_resources.pdf. Accessed November 2023.

would occur at a time when some basins are either being recharged at their maximum capacity or are already full. Conversely, reductions in spring runoff and higher evapotranspiration because of higher temperatures could reduce the amount of water available for recharge.[16]

The California Department of Water Resources report on climate change and effects on the State Water Project (SWP), the Central Valley Project, and the Sacramento-San Joaquin Delta, concludes that "climate change will likely have a significant effect on California's future water resources…[and] future water demand." It also reports 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."[17] It also reports 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.[18] 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."[19]

Hydrology and Sea Level Rise. As discussed above, climate change 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. 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 half the country's fruits and vegetables. Higher CO_2 levels can stimulate plant production and increase plant water-use efficiency. However, if temperatures rise and drier conditions prevail, water demand could increase; crop-yield could be threatened by a less reliable water supply; and greater ozone pollution could render plants more susceptible to pest and disease outbreaks. In addition, temperature increases

16 California Natural Resources Agency, Safeguarding California: Reducing Climate Risk, an Update to the 2009 California Climate Adaptation Strategy, 2014.

17 California Department of Water Resources Climate Change Report, Progress on Incorporating Climate Change into Planning and Management of California's Water Resources, July 2006, page 2-54, https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=6454.

18 California Department of Water Resources Climate Change Report, Progress on Incorporating Climate Change into Planning and Management of California's Water Resources, July 2006, page 2-75, https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=6454.

19 Intergovernmental Panel on Climate Change, Fifth Assessment Report, Summary for Policy Makers, 2013, page 20.

could change the time of year certain crops, such as wine grapes, bloom or ripen, and thus affect their quality.[20]

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 2-11.5°F (1.1-6.4°C) by 2100, with significant regional variation.[21] 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 United States 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.[22]

Regulatory Framework: Federal

In response to growing scientific and political concern with global climate change, federal and state entities have adopted a series of laws to reduce emissions of GHG emissions to the atmosphere.

Federal Clean Air Act. The U.S. Supreme Court ruled in *Massachusetts v. Environmental Protection Agency*, 127 S.Ct. 1438 (2007), that CO_2 and other GHG emissions are pollutants under the federal Clean Air Act (CAA), which the USEPA must regulate if it determines they pose an endangerment to public health or welfare. The U.S. Supreme Court did not mandate that the USEPA enact regulations to reduce GHG emissions. Instead, the Court found that the USEPA could avoid acting if it found that GHG emissions do not contribute to climate change or if it offered a "reasonable explanation" for not determining that GHG emissions contribute to climate change.

On April 17, 2009, the USEPA issued a proposed finding that GHG emissions contribute to air pollution that may endanger public health or welfare. On April 24, 2009, the proposed rule was published in the Federal Register under Docket ID No. EPA-HQ-OAR-2009-0171. The USEPA stated that high atmospheric levels of GHG emissions "are the unambiguous result of human emissions and are very likely the cause of the observed increase in average temperatures and other climatic changes." The USEPA further found that "atmospheric concentrations of greenhouse gases endanger public health and welfare within the meaning of Section 202 of the Clean Air Act." The findings were signed by the USEPA Administrator on December 7, 2009. The final findings were published in the Federal Register on December 15, 2009. The final rule was effective on January 14, 2010.[23] While these findings alone do not impose any requirements on industry or other entities, this

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20 California Climate Change Center, Our Changing Climate: Assessing the Risks to California, 2012, https://www.cakex.org/sites/default/files/documents/CEC-500-2012-007.pdf.

21 National Research Council, Advancing the Science of Climate Change, 2010, https://nap.nationalacademies.org/catalog/12782/advancing-the-science-of-climate-change. Accessed November 2023.

22 Parmesan, C., and H. Galbraith, Observed Impacts of Global Climate Change in the U.S., Prepared for the Pew Center on Global Climate Change, November 2004, https://www.c2es.org/site/assets/uploads/2004/11/observed-impacts-climate-change-united-states.pdf. November 2023.

23 USEPA, Endangerment and Cause or Contribute Findings for Greenhouse Gases Under Section 202(a) of the Clean Air Act, Final Rule.

action is a prerequisite to regulatory actions by the USEPA, including, but not limited to, GHG emissions standards for light-duty vehicles.

On April 4, 2012, the USEPA published a proposed rule to establish, for the first time, a new source performance standard for GHG emissions. Under the proposed rule, new fossil fuel–fired electric generating units larger than 25 megawatts (MW) are required to limit emissions to 1,000 pounds of CO_2 per MW-hour (CO_2/MWh) on an average annual basis, subject to certain exceptions. Subsequently, on April 23, 2018, the USEPA issued a policy stating that CO_2 emissions from biomass-fired and other biogenic sources would be considered carbon neutral when used for energy production at stationary sources.

On April 17, 2012, the USEPA issued emission rules for oil production and natural gas production and processing operations, which are required by the CAA under Title 40 of the Code of Federal Regulations, Parts 60 and 63. The final rules include the first federal air standards for natural gas wells that are hydraulically fractured, along with requirements for several other sources of pollution in the oil and gas industry that currently are not regulated at the federal level.[24]

Corporate Average Fuel Economy (CAFE) Standards. In response to the *Massachusetts v. Environmental Protection Agency* ruling, the George W. Bush Administration issued Executive Order 13432 in 2007, directing the USEPA, the United States Department of Transportation (USDOT), and the United States Department of Energy (USDOE) to establish regulations that reduce GHG emissions from motor vehicles, non-road vehicles, and non-road engines by 2008. In 2009, the National Highway Traffic Safety Administration (NHTSA) issued a final rule regulating fuel efficiency for and GHG emissions from cars and light-duty trucks for model year 2011; in 2010, the USEPA and the NHTSA issued a final rule regulating cars and light-duty trucks for model years 2012–2016.

In 2010, President Obama issued a memorandum directing the USEPA, USDOT, USDOE, and NHTSA to establish additional standards regarding fuel efficiency and GHG emissions reduction, clean fuels, and advanced vehicle infrastructure. In response to this directive, the USEPA and NHTSA proposed stringent, coordinated federal GHG emissions and fuel economy standards for model years 2017–2025 light-duty vehicles. The proposed standards are projected to achieve 163 grams/mile of CO_2 in model year 2025, on an average industry fleet-wide basis, which is equivalent to 54.5 miles per gallon (mpg) if the standards were achieved solely through fuel efficiency. The final rule was adopted in 2012 for model years 2017–2021. In March 2020, NHTSA and USEPA adopted new less stringent standards covering model years 2021 through 2026.

In addition to the regulations applicable to cars and light-duty trucks described above, in 2011 the USEPA and the NHTSA announced fuel economy and GHG standards for medium- and heavy-duty trucks for model years 2014–2018. The standards for CO_2 emissions and fuel consumption are tailored to three main vehicle categories: combination tractors, heavy-duty pickup trucks and vans, and vocational vehicles. According to the USEPA, this regulatory program would reduce GHG

[24] USEPA, 2012 Final Rules for Oil and Natural Gas Industry, April 17, 2012, https://www.epa.gov/controlling-air-pollution-oil-and-natural-gas-industry/2012-final-rules-oil-and-natural-gas-industry. Accessed November 2023.

emissions and fuel consumption for the affected vehicles by 6 to 23 percent over the 2010 baselines.[25]

Building on the success of the first phase of standards, in August 2016, the USEPA and the 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 were to lower CO_2 emissions by approximately 1.1 billion metric tons and save vehicle owners fuel costs of about $170 billion.[26] On August 10, 2021, NHTA proposed new CAFE standards for 2024-2026 that would increase the stringency of standards by 8 percent per year rather than the previous 1.5 percent.

On September 19, 2019, the U.S. Department of Transportation's National Highway Traffic Safety Administration (NHTSA) and USEPA issued a final action entitled the "One National Program Rules" to enable the federal government to provide nationwide uniform fuel economy and GHG emission standards for automobile and light duty trucks. This action finalizes the Safe Affordable Fuel Efficient (SAFE) Vehicles Rule and clarifies that federal law preempts state and local tailpipe GHG emissions standards as well as zero emission vehicle (ZEV) mandates. On March 31, 2020, Part II of the SAFE Vehicles was issued and sets carbon dioxide emissions and CAFE standards for passenger vehicles and light duty trucks, covering model years 2021-2026.[27] On December 21, 2021, NHTA repealed the SAFE I Rule.

Energy Independence and Security Act. The Energy Independence and Security Act of 2007 (EISA) facilitates the reduction of national GHG emissions by requiring the following:

- Increasing the supply of alternative fuel sources by setting a mandatory Renewable Fuel Standard (RFS) that requires fuel producers to use at least 36 billion gallons of biofuel in 2022;
- Prescribing or revising standards affecting regional efficiency for heating and cooling products, procedures for new or amended standards, energy conservation, energy efficiency labeling for consumer electronic products, residential boiler efficiency, electric motor efficiency, and home appliances;
- Requiring approximately 25 percent greater efficiency for light bulbs by phasing out incandescent light bulbs between 2012 and 2014; requiring approximately 200 percent greater efficiency for light bulbs, or similar energy savings, by 2020; and
- While superseded by the USEPA and the NHTSA actions described above, (i) establishing miles per gallon targets for cars and light trucks, and (ii) directing the NHTSA to establish a

25 The emission reductions attributable to the regulations for medium- and heavy-duty trucks were not included in the Project's emissions inventory due to the difficulty in quantifying the reductions. Excluding these reductions results in a more conservative (i.e., higher) estimate of emissions for the Project.

26 USEPA 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.

27 U.S. Department of Transportation. 2020. The Safer Affordable Fuel-Efficient (SAFE) Vehicles Rule for Model Years 2021-2026 Passenger Cars and Light Trucks, https://www.nhtsa.gov/sites/nhtsa.dot.gov/files/documents/final_safe_preamble_web_version_200330.pdf.

fuel economy program for medium- and heavy-duty trucks and create a separate fuel economy standard for trucks.

Additional provisions of the EISA address energy savings in government and public institutions, promote research for alternative energy, additional research in carbon capture, international energy programs, and the creation of "green jobs."[28]

2024 Fleet Rules. On March 20, 2024, the USEPA issued final rules mandating significant reductions in future light- and medium-duty vehicles from model years 2027 to 2032. These rules call for vehicle manufacturers to achieve an industry-wide average target of 85 grams of CO_2 per mile, a fifty-percent reduction compared to standards for model year 2026 vehicles. Similar regulations would reduce CO_2 emission 44 percent when compared to standards for model year 2026 vehicles. On March 29, 2024, the USEPA approved its "Greenhouse Gas Emissions Standards for Heavy-Duty Vehicles – Phase 3" regulations that sets more stringent standard for heavy-duty vehicles beginning in model year 2027. This regulation will accelerate the shift of heavy-duty vehicles to cleaner fuels and electric drivetrains.

Regulatory Framework: State

Scoping Plan for Achieving Carbon Neutrality (Scoping Plan). The Scoping Plan is a GHG emission reduction roadmap developed and updated by the California Air Resources Board (CARB) at least once every five years, as required by Assembly Bill (AB) 32. It lays out the transformations needed across various sectors to reduce GHG emissions and reach the State's climate targets. CARB published the Final 2022 Scoping Plan for Achieving Carbon Neutrality (2022 Scoping Plan Update) in November 2022, as the third update to the initial plan that was adopted in 2008. The initial 2008 Scoping Plan laid out a path to achieve the AB 32 target of returning to 1990 levels of GHG emissions by 2020, a reduction of approximately 15 percent below business as usual activities.[29] The 2008 Scoping Plan included a mix of incentives, regulations, and carbon pricing, laying out the portfolio approach to addressing climate change and clearly making the case for using multiple tools to meet California's GHG targets. The 2013 Scoping Plan Update (adopted in 2014) assessed progress toward achieving the 2020 target and made the case for addressing short-lived climate pollutants (SLCPs).[30] The 2017 Scoping Plan Update,[31] shifted focus to the newer Senate Bill (SB) 32 goal of a 40 percent reduction below 1990 levels by 2030 by laying out a detailed cost-effective and technologically feasible path to this target, and also assessed progress towards achieving the AB 32 goal of returning to 1990 GHG levels by 2020. The 2020 goal was ultimately reached in 2016, four years ahead of the schedule called for under AB 32.

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28 A green job, as defined by the United States Department of Labor, is a job in business that produces goods or provides services that benefit the environment or conserve natural resources.

29 CARB. 2008. Climate Change Scoping Plan. https://ww2.arb.ca.gov/our-work/programs/ab-32-climate-change-scoping-plan/2008-scoping-plan-documents.

30 CARB. 2014. First Update to the Climate Change Scoping Plan. https://ww2.arb.ca.gov/sites/default/files/classic/cc/scopingplan/2013_update/first_update_climate_change_scoping_plan.pdf

31 CARB, California's 2017 Climate Change Scoping Plan, 2017, https://ww2.arb.ca.gov/sites/default/files/classic/cc/scopingplan/scoping_plan_2017.pdf

The 2022 Scoping Plan Update is the most comprehensive and far-reaching Scoping Plan developed to date. It identifies a technologically feasible, cost-effective, and equity-focused path to achieve new targets for carbon neutrality by 2045 and to reduce anthropogenic GHG emissions to at least 85 percent below 1990 levels, while also assessing the progress California is making toward reducing its GHG emissions by at least 40 percent below 1990 levels by 2030, as called for in SB 32 and laid out in the 2017 Scoping Plan.[32] The 2030 target is an interim but important stepping stone along the critical path to the broader goal of deep decarbonization by 2045. The relatively longer path assessed in the 2022 Scoping Plan Update incorporates, coordinates, and leverages many existing and ongoing efforts to reduce GHGs and air pollution, while identifying new clean technologies and energy. Given the focus on carbon neutrality, the 2022 Scoping Plan Update also includes discussion for the first time of the natural and working lands sectors as sources for both sequestration and carbon storage, and as sources of emissions as a result of wildfires. Table 3 summarizes the potential scenarios to reduce emissions through 2045.

Table 3
Estimated Statewide Greenhouse Gas Emissions Reductions in the 2022 Scoping Plan

Emissions Scenario	GHG Emissions ($MMTCO_2e$)
2019	
2019 State GHG Emissions	404
2030	
2030 BAU Forecast	312
2030 GHG Emissions without Carbon Removal and Capture	233
2030 GHG Emissions with Carbon Removal and Capture	226
2030 Emissions Target Set by AB 32 (i.e., 1990 level by 2030)	260
Reduction below Business-As-Usual necessary to achieve 1990 levels by 2030	52 (16.7%)[a]
2045	
2045 BAU Forecast	266
2045 GHG Emissions without Carbon Removal and Capture	72
2045 GHG Emissions with Carbon Removal and Capture	(3)

$MMTCO_2e$ = million metric tons of carbon dioxide equivalents; parenthetical numbers represent negative values.
[a] 312 – 260 = 52. 52 / 312 = 16.7%
Source: CARB, Final 2022 Climate Change Scoping Plan, November 2022.

The 2022 Scoping Plan Update reflects existing and recent direction in the Governor's Executive Orders and State Statutes, which identify policies, strategies, and regulations in support of and implementation of the Scoping Plan. Among these include Executive Order B-55-18 and AB 1279 (The California Climate Crisis Act), which identify the 2045 carbon neutrality and GHG reduction targets required for the Scoping Plan. Table 4 provides a summary of major climate legislation and executive orders issued since the adoption of the 2017 Scoping Plan.

Table 4
Major Climate Legislation and Executive Orders Enacted Since the 2017 Scoping Plan

32 CARB, California's 2017 Climate Change Scoping Plan, 2017, ww2.arb.ca.gov/sites/default/files/classic/cc/scopingplan/scoping_plan_2017.pdf.

Bill/Executive Order	Summary
Assembly Bill 1279 (AB 1279) (Muratsuchi, Chapter 337, Statutes of 2022) *The California Climate Crisis Act*	AB 1279 establishes the policy of the state to achieve carbon neutrality as soon as possible, but no later than 2045; to maintain net negative GHG emissions thereafter; and to ensure that by 2045 statewide anthropogenic GHG emissions are reduced at least 85 percent below 1990 levels. The bill requires CARB to ensure that the Scoping Plan updates identify and recommend measures to achieve carbon neutrality, and to identify and implement policies and strategies that enable CO_2 removal solutions and carbon capture, utilization, and storage (CCUS) technologies. This bill is reflected directly in the 2022 Scoping Plan Update but is addressed in the State's Priority Climate Action Plan (PCAP) that aims to reduce anthropogenic emissions by 85 percent below 1990 levels and achieve carbon neutrality by 2045. The PCAP was submitted to the U.S. Environmental Protection Agency on March 1, 2024.
Senate Bill 905 (SB 905) (Caballero, Chapter 359, Statutes of 2022) *Carbon Capture, Removal, Utilization, and Storage Program*	SB 905 requires CARB to create the Carbon Capture, Removal, Utilization, and Storage Program to evaluate, demonstrate, and regulate CCUS and carbon dioxide removal (CDR) projects and technology. The bill requires CARB, on or before January 1, 2025, to adopt regulations creating a unified state permitting application for approval of CCUS and CDR projects. The bill also requires the Secretary of the Natural Resources Agency to publish a framework for governing agreements for two or more tracts of land overlying the same geologic storage reservoir for the purposes of a carbon sequestration project. The 2022 Scoping Plan Update modeling reflects both CCUS and CDR contributions to achieve carbon neutrality.
Senate Bill 846 (SB 846) (Dodd, Chapter 239, Statutes of 2022) *Diablo Canyon Powerplant: Extension of Operations*	SB 846 extends the Diablo Canyon Power Plant's sunset date by up to five additional years for each of its two units and seeks to make the nuclear power plant eligible for federal loans. The bill requires that the California Public Utilities Commission (CPUC) not include and disallow a load-serving entity from including in their adopted resource plan, the energy, capacity, or any attribute from the Diablo Canyon power plant. The 2022 Scoping Plan Update explains the emissions impact of this legislation.
Senate Bill 1020 (SB 1020) (Laird, Chapter 361, Statutes of 2022) *Clean Energy, Jobs, and Affordability Act of 2022*	SB 1020 adds interim renewable energy and zero carbon energy retail sales of electricity targets to California end-use customers set at 90 percent in 2035 and 95 percent in 2040. It accelerates the timeline required to have 100 percent renewable energy and zero carbon energy procured to serve state agencies from the original target year of 2045 to 2035. This bill requires each state agency to individually achieve the 100 percent goal by 2035 with specified requirements. This bill requires the CPUC, California Energy Commission (CEC), and CARB, on or before December 1, 2023, and annually thereafter, to issue a joint reliability progress report that reviews system and local reliability. The bill also modifies the requirement for CARB to hold a portion of its Scoping Plan workshops in regions of the state with the most significant exposure to air pollutants by further specifying that this includes communities with minority populations or low-income communities in areas designated as being in extreme federal non-attainment. The 2022 Scoping Plan Update describes the implications of this legislation on emissions.
Senate Bill 1137 (SB 1137) (Gonzales, Chapter 365, Statutes of 2022)	SB 1137 prohibits the development of new oil and gas wells or infrastructure in health protection zones, as defined, except for purposes of public health and safety or other limited exceptions. The bill requires operators of existing oil and gas wells or infrastructure within health protection zones to undertake specified monitoring, public notice, and nuisance requirements. The bill requires CARB to consult and concur with

Bill/Executive Order	Summary
Oil & Gas Operations: Location Restrictions: Notice of Intention: Health protection zone: Sensitive receptors	the California Geologic Energy Management Division (CalGEM) on leak detection and repair plans for these facilities, adopt regulations as necessary to implement emission detection system standards, and collaborate with CalGEM on public access to emissions detection data.
Senate Bill 1075 (SB 1075) (Skinner, Chapter 363, Statutes of 2022) *Hydrogen: Green Hydrogen: Emissions of Greenhouse Gases*	SB 1075 requires CARB, by June 1, 2024, to prepare an evaluation that includes: policy recommendations regarding the use of hydrogen, and specifically the use of green hydrogen, in California; a description of strategies supporting hydrogen infrastructure, including identifying policies that promote the reduction of GHGs and short-lived climate pollutants; a description of other forms of hydrogen to achieve emission reductions; an analysis of curtailed electricity; an estimate of GHG and emission reductions that could be achieved through deployment of green hydrogen through a variety of scenarios; an analysis of the potential for opportunities to integrate hydrogen production and applications with drinking water supply treatment needs; policy recommendations for regulatory and permitting processes associated with transmitting and distributing hydrogen from production sites to end uses; an analysis of the life-cycle GHG emissions from various forms of hydrogen production; and an analysis of air pollution and other environmental impacts from hydrogen distribution and end uses. This bill would inform the production of hydrogen at the scale called for in the 2022 Scoping Plan Update.
Assembly Bill 1757 (AB 1757) (Garcia, Chapter 341, Statutes of 2022) *California Global Warming Solutions Act of 2006: Climate Goal: Natural and Working Lands*	AB 1757 requires the California Natural Resources Agency (CNRA), in collaboration with CARB, other state agencies, and an expert advisory committee, to determine a range of targets for natural carbon sequestration, and for nature-based climate solutions, that reduce GHG emissions in 2030, 2038, and 2045 by January 1, 2024. These targets must support state goals to achieve carbon neutrality and foster climate adaptation and resilience. This bill also requires CARB to develop standard methods for state agencies to consistently track GHG emissions and reductions, carbon sequestration, and additional benefits from natural and working lands over time. These methods will account for GHG emissions reductions of CO2, methane, and nitrous oxide related to natural and working lands and the potential impacts of climate change on the ability to reduce GHG emissions and sequester carbon from natural and working lands, where feasible. This 2022 Scoping Plan Update describes the next steps and implications of this legislation for the natural and working lands sector.
Senate Bill 1206 (SB 1206) (Skinner, Chapter 884, Statutes of 2022) *Hydrofluorocarbon gases: sale or distribution*	SB 1206 mandates a stepped sales prohibition on newly produced high-global warming potential (GWP) HFCs to transition California's economy toward recycled and reclaimed HFCs for servicing existing HFC-based equipment. Additionally, SB 1206 also requires CARB to develop regulations to increase the adoption of very low-, i.e., GWP < 10, and no-GWP technologies in sectors that currently rely on higher-GWP HFCs.
Senate Bill 27 (SB 27) (Skinner, Chapter 237, Statutes of 2021) *Carbon Sequestration: State Goals: Natural and*	SB 27 requires CNRA, in coordination with other state agencies, to establish the Natural and Working Lands Climate Smart Strategy by July 1, 2023. This bill also requires CARB to establish specified CO2 removal targets for 2030 and beyond as part of its Scoping Plan. Under SB 27, CNRA is to establish and maintain a registry to identify projects in the state that drive climate action on natural and working lands and are seeking funding.

Bill/Executive Order	Summary
Working Lands: Registry of Projects	CNRA also must track carbon removal and GHG emission reduction benefits derived from projects funded through the registry. This bill is reflected directly in the 2022 Scoping Plan Update as CO_2 removal targets for 2030 and 2045 in support of carbon neutrality.
Senate Bill 596 (SB 596) (Becker, Chapter 246, Statutes of 2021) *Greenhouse Gases: Cement Sector: Net- zero Emissions Strategy*	SB 596 requires CARB, by July 1, 2023, to develop a comprehensive strategy for the state's cement sector to achieve net-zero-emissions of GHGs associated with cement used within the state as soon as possible, but no later than December 31, 2045. The bill establishes an interim target of 40 percent below the 2019 average GHG intensity of cement by December 31, 2035. Under SB 596, CARB must: ● Define a metric for GHG intensity and establish a baseline from which to measure GHG intensity reductions. ● Evaluate the feasibility of the 2035 interim target (40 percent reduction in GHG intensity) by July 1, 2028. ● Coordinate and consult with other state agencies. ● Prioritize actions that leverage state and federal incentives. ● Evaluate measures to support market demand and financial incentives to encourage the production and use of cement with low GHG intensity. The 2022 Scoping Plan Update modeling is designed to achieve these outcomes.
Executive Order N-82-20	Governor Newsom signed Executive Order N-82-20 in October 2020 to combat the climate and biodiversity crises by setting a statewide goal to conserve at least 30 percent of California's land and coastal waters by 2030. The Executive Order also instructed the CNRA, in consultation with other state agencies, to develop a Natural and Working Lands Climate Smart Strategy that serves as a framework to advance the state's carbon neutrality goal and build climate resilience. In addition to setting a statewide conservation goal, the Executive Order directed CARB to update the target for natural and working lands in support of carbon neutrality as part of this Scoping Plan, and to take into consideration the NWL Climate Smart Strategy. CO_2 Executive Order N-82-20 also calls on the CNRA, in consultation with other state agencies, to establish the California Biodiversity Collaborative (Collaborative). The Collaborative shall be made up of governmental partners, California Native American tribes, experts, business and community leaders, and other stakeholders from across the state. State agencies will consult the Collaborative on efforts to: ● Establish a baseline assessment of California's biodiversity that builds upon existing data and can be updated over time. ● Analyze and project the impact of climate change and other stressors in California's biodiversity. ● Inventory current biodiversity efforts across all sectors and highlight opportunities for additional action to preserve and enhance biodiversity. CNRA also is tasked with advancing efforts to conserve biodiversity through various actions, such as streamlining the state's process to approve and facilitate projects related to environmental restoration and land management. The California Department of Food and Agriculture (CDFA) is directed to advance efforts to conserve biodiversity through measures such

Bill/Executive Order	Summary
	as reinvigorating populations of pollinator insects, which restore biodiversity and improve agricultural production. The Natural and Working Lands Climate Smart Strategy informs the 2022 Scoping Plan Update.
Executive Order N-79-20	Governor Newsom signed Executive Order N-79-20 in September 2020 to establish targets for the transportation sector to support the state in its goal to achieve carbon neutrality by 2045. The targets established in this Executive Order are: ● 100 percent of in-state sales of new passenger cars and trucks will be zero-emission by 2035. ● 100 percent of medium- and heavy-duty vehicles will be zero-emission by 2045 for all operations where feasible, and by 2035 for drayage trucks. ● 100 percent of off-road vehicles and equipment will be zero-emission by 2035 where feasible. The Executive Order also tasked CARB to develop and propose regulations that require increasing volumes of zero- electric passenger vehicles, medium- and heavy-duty vehicles, drayage trucks, and off-road vehicles toward their corresponding targets of 100 percent zero-emission by 2035 or 2045, as listed above. The 2022 Scoping Plan Update modeling reflects achieving these targets.
Executive Order N-19-19	Governor Newsom signed Executive Order N-19-19 in September 2019 to direct state government to redouble its efforts to reduce GHG emissions and mitigate the impacts of climate change while building a sustainable, inclusive economy. This Executive Order instructs the Department of Finance to create a Climate Investment Framework that: ● Includes a proactive strategy for the state's pension funds that reflects the increased risks to the economy and physical environment due to climate change. ● Provides a timeline and criteria to shift investments to companies and industry sectors with greater growth potential based on their focus of reducing carbon emissions and adapting to the impacts of climate change. ● Aligns with the fiduciary responsibilities of the California Public Employees' Retirement System, California State Teachers' Retirement System, and the University of California Retirement Program. Executive Order N-19-19 directs the State Transportation Agency to leverage more than $5 billion in annual state transportation spending to help reverse the trend of increased fuel consumption and reduce GHG emissions associated with the transportation sector. It also calls on the Department of General Services to leverage its management and ownership of the state's 19 million square feet in managed buildings, 51,000 vehicles, and other physical assets and goods to minimize state government's carbon footprint. Finally, it tasks CARB with accelerating progress toward California's goal of five million ZEV sales by 2030 by: ● Developing new criteria for clean vehicle incentive programs to encourage manufacturers to produce clean, affordable cars. ● Proposing new strategies to increase demand in the primary and secondary markets for ZEVs.

Bill/Executive Order	Summary
	● Considering strengthening existing regulations or adopting new ones to achieve the necessary GHG reductions from within the transportation sector. The 2022 Scoping Plan Update modeling reflects efforts to accelerate ZEV deployment.
Senate Bill 576 (SB 576) (Umberg, Chapter 374, Statutes of 2019) *Coastal Resources: Climate Ready Program and Coastal Climate Change Adaptation, Infrastructure and Readiness Program*	Sea level rise, combined with storm-driven waves, poses a direct risk to the state's coastal resources, including public and private real property and infrastructure. Rising marine waters threaten sensitive coastal areas, habitats, the survival of threatened and endangered species, beaches, other recreation areas, and urban waterfronts. SB 576 mandates that the Ocean Protection Council develop and implement a coastal climate adaptation, infrastructure, and readiness program to improve the climate change resiliency of California's coastal communities, infrastructure, and habitat. This bill also instructs the State Coastal Conservancy to administer the Climate Ready Program, which addresses the impacts and potential impacts of climate change on resources within the conservancy's jurisdiction.
Assembly Bill 65 (AB 65) (Petrie- Norris, Chapter 347, Statutes of 2019) *Coastal Protection: Climate Adaption: Project Prioritization: Natural Infrastructure: Local General Plans*	This bill requires the State Coastal Conservancy, when it allocates any funding appropriated pursuant to the California Drought, Water, Parks, Climate, Coastal Protection, and Outdoor Access For All Act of 2018, to prioritize projects that use natural infrastructure in coastal communities to help adapt to climate change. The bill requires the conservancy to provide information to the Office of Planning and Research on any projects funded pursuant to the above provision to be considered for inclusion into the clearinghouse for climate adaptation information. The bill authorizes the conservancy to provide technical assistance to coastal communities to better assist them with their projects that use natural infrastructure.
Executive Order B-55-18	Governor Brown signed Executive Order B-55-18 in September 2018 to establish a statewide goal to achieve carbon neutrality as soon as possible, and no later than 2045, and to achieve and maintain net negative emissions thereafter. Policies and programs undertaken to achieve this goal shall: ● Seek to improve air quality and support the health and economic resiliency of urban and rural communities, particularly low-income and disadvantaged communities. ● Be implemented in a manner that supports climate adaptation and biodiversity, including protection of the state's water supply, water quality, and native plants and animals. This Executive Order also calls for CARB to: ● Develop a framework for implementation and accounting that tracks progress toward this goal. ● Ensure future Scoping Plans identify and recommend measures to achieve the carbon neutrality goal. The 2022 Scoping Plan Update is designed to achieve carbon neutrality no later than 2045 and the modeling includes technology and fuel transitions to achieve that outcome.
Senate Bill 100 (SB 100) (De León, Chapter 312, Statutes of 2018) *California Renewables Portfolio Standard Program:*	Under SB 100, the CPUC, CEC, and CARB shall use programs under existing laws to achieve 100 percent clean electricity. The statute requires these agencies to issue a joint policy report on SB 100 every four years. The first of these reports was issued in 2021. The 2022 Scoping Plan Update reflects the SB 100 Core Scenario resource mix with a few minor updates.

Bill/Executive Order	Summary
emissions of greenhouse gases	
Assembly Bill 2127 (AB 2127) (Ting, Chapter 365, Statutes of 2018) *Electric Vehicle Charging Infrastructure: Assessment*	This bill requires the CEC, working with CARB and the CPUC, to prepare and biennially update a statewide assessment of the electric vehicle charging infrastructure needed to support the levels of electric vehicle adoption required for the state to meet its goals of putting at least 5 million zero-emission vehicles on California roads by 2030 and of reducing emissions of GHGs to 40 percent below 1990 levels by 2030. The bill requires the CEC to regularly seek data and input from stakeholders relating to electric vehicle charging infrastructure. This bill supports the deployment of ZEVs as modeled in the 2022 Scoping Plan Update.
Senate Bill 30 (SB 30) (Lara, Chapter 614, Statutes of 2018) *Insurance: Climate Change*	This bill requires the Insurance Commissioner to convene a working group to identify, assess, and recommend risk transfer market mechanisms that, among other things, promote investment in natural infrastructure to reduce the risks of climate change related to catastrophic events, create incentives for investment in natural infrastructure to reduce risks to communities, and provide mitigation incentives for private investment in natural lands to lessen exposure and reduce climate risks to public safety, property, utilities, and infrastructure. The bill requires the policies recommended to address specified questions.
Assembly Bill 2061 (AB 2061) (Frazier, Chapter 580, Statutes of 2018) *Near-zero-emission and Zero-emission Vehicles*	Existing state and federal law sets specified limits on the total gross weight imposed on the highway by a vehicle with any group of two or more consecutive axles. Under existing federal law, the maximum gross vehicle weight of that vehicle may not exceed 82,000 pounds. AB 2061 authorizes a near-zero- emission vehicle or a zero-emission vehicle to exceed the weight limits on the power unit by up to 2,000 pounds. This bill supports the deployment of cleaner trucks as modeled in this 2022 Scoping Plan Update.

The 2022 Scoping Plan Scenario identifies the need to accelerate AB32's 2030 target, from 40 percent to 48 percent below 1990 levels. Cap-and-Trade regulation continues to play a large factor in the reduction of near-term emissions for meeting the 2030 reduction target. Every sector of the economy will need to begin to transition in this decade to meet these GHG reduction goals and achieve carbon neutrality no later than 2045. The 2022 Scoping Plan Update approaches decarbonization from two perspectives, managing a phasedown of existing energy sources and technologies, as well as increasing, developing, and deploying alternative clean energy sources and technology.

The Scoping Plan Scenario includes references to relevant statutes and Executive Orders, although it is not comprehensive of all existing new authorities for directing or supporting the actions described. Table 2-1 identifies actions related to a variety of sectors such as: smart growth and reductions in Vehicle Miles Traveled (VMT); light-duty vehicles (LDV) and zero-emission vehicles (ZEV); truck ZEVs; reduce fossil energy, emissions, and GHGs for aviation ocean-going vessels, port operations, freight and passenger rail, oil and gas extraction; and petroleum refining; improvements in electricity generation; electrical appliances in new and existing residential and commercial buildings; electrification and emission reductions across industries such as the for food products, construction equipment, chemicals and allied products, pulp and paper, stone/clay/glass/cement, other industrial manufacturing, and agriculture; retiring of combined heat and power facilities; low carbon fuels for transportation, business, and industry; improvements in non-combustion methane emissions, and introduction of low GWP refrigerants.

Achieving the targets described in the 2022 Scoping Plan Update will require continued commitment to and successful implementation of existing policies and programs, and identification of new policy tools and technical solutions to go further, faster. California's Legislature and state agencies will continue to collaborate to achieve the state's climate, clean air, equity, and broader economic and environmental protection goals. It will be necessary to maintain and strengthen this collaborative effort, and to draw upon the assistance of the federal government, regional and local governments, tribes, communities, academic institutions, and the private sector to achieve the state's near-term and longer-term emission reduction goals and a more equitable future for all Californians. The Scoping Plan acknowledges that the path forward is not dependent on one agency, one state, or even one country. However, the State can lead by engaging Californians and demonstrating how actions at the state, regional, and local levels of governments, as well as action at community and individual levels, can contribute to addressing the challenge.

Aligning local jurisdiction action with state-level priorities to tackle climate change and the outcomes called for in the 2022 Scoping Plan Update is identified as critical to achieving the statutory targets for 2030 and 2045. The 2022 Scoping Plan Update discusses the role of local governments in meeting the State's GHG reductions goals. Local governments have the primary authority to plan, zone, approve, and permit how and where land is developed to accommodate population growth, economic growth, and the changing needs of their jurisdictions. They also make critical decisions on how and when to deploy transportation infrastructure, and can choose to support transit, walking, bicycling, and neighborhoods that do not force people into cars. Local governments also have the option to adopt building ordinances that exceed statewide building code requirements, and play a critical role in facilitating the rollout of ZEV infrastructure. As a result, local government decisions play a critical role in supporting state-level measures to contain the growth of GHG emissions associated with the transportation system and the built environment—the two largest GHG emissions sectors over which local governments have authority. The City has taken the initiative in combating climate change by developing programs and regulations. Each of these is discussed further below.

California's Priority Climate Action Plan (PCAP). The PCAP was released on March 1, 2024 and is based on the goals set by AB 1279, which aims to reduce anthropogenic emissions by 85 percent below 1990 levels and achieve carbon neutrality by 2045. The PCAP also relies on the 2022 Scoping Plan to achieve these goals and focus on Statewide and/or regional measures focused on seven topics:

- Transportation
    - Create a Holistic, Heavy-Duty Zero-Emissions Vehicle Buydown Program
    - Install Truck Charging to Support Zero-Emissions Goods Movement at California Ports and Warehouse Districts
    - Advance the Deployment of Clean Off-Road Equipment
    - Bolster Investments in the State's Sustainable Port and Freight Infrastructure
    - Support Mobility Projects Uplifted by Communities
    - Allow for Local Deployment of ZEV Infrastructure and Low-Income ZEV Support
- Industrial
    - Accelerate Industrial Decarbonization
- Energy
    - Expand Decarbonization through the Energy Conservation Assistance Act
    - Create a Funding Program to Upgrade the Capacity of Distribution Systems
    - Expand the Success of California's Self-Generation Incentive Program for Behind-the-Meter Energy Storage
    - Bolster Healthy Landscapes and Resilient Communities through Expanding the Biomass to Carbon Negative Biofuels Program
    - Deploy Equitable Building Decarbonization
    - Implement Bioenergy Projects
    - Enable Renewable Microgrids for Rural Communities and Tribes
- High Global Warming Potential
    - Expand F-gas Reduction Incentive Program
- Agriculture
    - Expand California's Healthy Soils Practices
    - Reduce Methane Emissions through Dairy Digesters
- Natural and Working Lands
    - Bolster California's Forest Health Program
    - Expand Urban and Community Forest Projects
    - Expand the State's Wetland Restoration Program
- Waste
    - Food Waste Prevention and Edible Food Recovery Program
    - Bolster Organics Recycling Infrastructure

These control strategies are intended to be implemented through Statewide or regional programs that would supplement the blueprint in the State's Scoping Plan. These strategies are generally not applicable to development projects in urban or suburban areas.

Advanced Clean Cars Regulations. In 2012, CARB approved the Advanced Clean Cars (ACC) program, a new emissions-control program for model years 2015–2025.[33] The components of the Advance Clean Car program include the Low-Emission Vehicle (LEV) regulations that reduce criteria

[33] California Air Resources Board, California's Advanced Clean Cars Program, https://ww2.arb.ca.gov/our-work/programs/advanced-clean-cars-program

pollutants and GHG emissions from light- and medium-duty vehicles, and the 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.[34]

On September 23, 2020, Governor Gavin Newsom signed Executive Order No. N-79-20 that phases out sales of new gas-powered passenger cars by 2035 in California with an additional ten-year transition period for heavy vehicles. The state would not restrict used car sales, nor forbid residents from owning gas-powered vehicles. In accordance with the Executive Order, CARB is developing a 2020 Mobile Source Strategy, a comprehensive analysis that presents scenarios for possible strategies to reduce the carbon, toxic and unhealthy pollution from cars, trucks, equipment, and ships. The strategies will provide important information for numerous regulations and incentive programs going forward by conveying what is necessary to address the aggressive emission reduction requirements.

In November 2022, the ACC II regulations took effect, setting annual ZEV and plug-in hybrid vehicle sales requirements for model years 2026 to 2035 (ZEV program) and increasingly more stringent exhaust and evaporative emission standards (LEV program) to ensure automakers phase out new sales of internal combustion engine vehicles.

California Appliance Efficiency Regulations (Title 20, Sections 1601 through 1608). The 2014 Appliance Efficiency Regulations, adopted by the CEC, include standards for new appliances (e.g., refrigerators) and lighting, if they are sold or offered for sale in California. These standards include minimum levels of operating efficiency, and other cost- effective measures, to promote the use of energy- and water-efficient appliances.

California Building Energy Efficiency Standards (Title 24, Part 6). California's Energy Efficiency Standards for Residential and Nonresidential Buildings, located at Title 24, Part 6 of the California Code of Regulations and commonly referred to as "Title 24," were established in 1978 in response to a legislative mandate to reduce California's energy consumption. Title 24 requires the design of building shells and building components to conserve energy. The standards are updated periodically to allow consideration and possible incorporation of new energy efficiency technologies and methods.[35] The 2022 standards continue to improve upon previous standards for new construction of, and additions and alterations to, residential and non-residential buildings and became effective January 1, 2023. Compliance with Title 24 is enforced through the building permit process. Key changes included encouraging heat pump technology for space and water heating, setting electric-ready requirements for single-family homes, expanding solar photovoltaic system and battery storage standards, and strengthening ventilation standards to improve indoor air quality.

34 Ibid.

35 California Energy Commission, 2019 Building Energy Efficiency Standards, https://www.energy.ca.gov/programs-and-topics/programs/building-energy-efficiency-standards/2019-building-energy-efficiency, Accessed November 2023.

California Green Building Standards (CALGreen Code). The California Green Building Standards Code (California Code of Regulations, Title 24, Part 11) are mandatory green building standards for new structures. They focus on measures to reduce water consumption, GHG emissions, and materials and waste. These codes are updated every three years, with the 2022 CalGreen code updates effective January 1, 2023. New requirements address requirements for Level 2 electric vehicle chargers and use of solar photovoltaic shade structures instead of shade trees. Voluntary measures focus on higher EV charging requirements for parking facilities.

Regulatory Framework: Regional

South Coast Air Quality Management District. The South Coast Air Quality Management District (SCAQMD) adopted a "Policy on Global Warming and Stratospheric Ozone Depletion" on April 6, 1990. The policy commits the SCAQMD to consider global impacts in rulemaking and in drafting revisions to the Air Quality Management Plan. In March 1992, the SCAQMD Governing Board reaffirmed this policy and adopted amendments to the policy to include the following directives:

- Phase out the use and corresponding emissions of chlorofluorocarbons, methyl chloroform (1,1,1-trichloroethane or TCA), carbon tetrachloride, and halons by December 1995;
- Phase out the large quantity use and corresponding emissions of hydrochlorofluorocarbons by the year 2000;
- Develop recycling regulations for hydrochlorofluorocarbons (e.g., SCAQMD Rules 1411 and 1415);
- Develop an emissions inventory and control strategy for methyl bromide; and
- Support the adoption of a California GHG emission reduction goal.

Southern California Association of Governments. To implement SB 375 and reduce GHG emissions by correlating land use and transportation planning, SCAG adopted the 2024-2050 RTP/SCS on April 4, 2024, to serve as the roadmap to fulfilling the region's compliance with GHG reduction targets. To this end, the 2024-2050 RTP/SCS recognizes that transportation investments and future land use patterns are inextricably linked and acknowledges how this relationship can help the region make choices that sustain existing resources while expanding efficiency, mobility, and accessibility for people across the region.

The 2024-2050 RTP/SCS calls for $751.7 billion in investments, including $303.3 billion for transit projects and operations, $75.4 billion for state highway operations and maintenance, $62.6 billion for goods movement, and $38 billion for active transportation. These investments would aim to achieve several key objective:

- A 11.6 percent reduction in overall vehicle miles traveled among passenger vehicles (from 2019).
- A 31.8 percent reduction in minutes of daily traffic delay per person (from 2019).

- Achievement of the region's targets for reducing greenhouse gases from autos and light-duty trucks by 19 percent per capita, from 2005 levels, by 2035.
- 465,000 new jobs supported by transportation investments or improved competitiveness each year.
- An overall return on investment of $2 for every $1 spent.

The 2024-2050 RTP/SCS land use pattern continues the trend of focusing new housing and employment growth in the region's Priority Development Areas (PDAs) and aims to enhance and build out the region's transit network. According to the 2024-2050 RTP/SCS, 66 percent of new households and 54 percent of new jobs between 2019–2050 will be located in PDAs, either near transit or in walkable communities.

Regulatory Framework: Local

City of Carson Building Code. The City's Building Code incorporates by reference the mandatory requirements of the 2022 California Building Standards Code and became effective January 1, 2023. The Building Code applies to dwellings, lodging houses, congregate residences, motels, apartments, or other similar residential uses.

Housing Element (Housing Needs Assessment). The Housing Element of the General Plan is prepared pursuant to state law and provides planning guidance in meeting housing needs identified in the SCAG Regional Housing Needs Assessment (RHNA). The current 2021-2029 Housing Element Update adopted in September 2022 identifies the City's housing conditions and needs, establishes the goals, objectives, and policies that are the foundation of the City's housing and growth strategy, and provides the array of programs the City intends to implement to create and preserve sustainable, mixed-income neighborhoods across the City.

The current Housing Needs Assessment chapter discusses the City's population and housing stock to identify housing needs for a variety of household types across the City. The Housing Element provides measures to streamline and incentivize development of affordable housing. Such measures include revising density bonuses for affordable housing; identifying locations which are ideal for funding programs to meet low-income housing goals; and rezoning areas to encourage low-income housing. With implementation of such measures to increase affordable housing, the Housing Element predicts a significant increase in housing production at all income ranges compared to previous cycles.

The Housing Element also promotes sustainability and resilience, and environmental justice through housing, as well as the need to reduce displacement. It encourages the utilization of alternatives to current parking standards that lower the cost of housing, support GHG and vehicle miles traveled (VMT) goals and recognize the emergence of shared and alternative mobility. The Element also identifies housing strategies for energy conservation, water conservation, alternative energy sources and sustainable development which support conservation and reduce demand.

Open Space and Environmental Conservation Element. The Open Space and Environmental Conservation Element of the City's General Plan was adopted on April 4, 2023, and sets forth the goals, objectives, and policies, which guide the City in the implementation of climate change programs and strategies. The Open Space and Environmental Conservation Element acknowledges the interrelationships among transportation and land use planning in meeting the City's mobility and air quality goals.

The Open Space and Environmental Conservation Element includes six key policies:

Policy 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

Policy OSEC-G-24: Incorporate green infrastructure design in new projects to promote sustainability in the built environment.

Policy 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.

Policy OSEC-G-26: Plan for extreme weather events by incorporating the potential effects and threats of cli-mate change into emergency management planning.

Policy 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.

Policy OSEC-G-28: Promote sustainable practices as well as environmental remediation for heavy industrial areas and seek to reduce trucking emissions.

City of Carson Climate Action Plan. The City's December 2017 Climate Action Plan (CAP) is designed to create sustainability-based performance targets through 2035 to advance economic, environmental, and equity objectives. The Plan calls for reducing GHG emissions Citywide by 49 percent below 2005 levels, which would put the City on a path to achieving long-term 2050 goals of reducing emissions by 80 percent below 1990 levels. The CAP includes strategies focused on the following sectors:

- Land Use and Transportation
    - Goal A: Accelerate the Market for EV Vehicles
        - Measure A1: EV Parking Policies
        - Measure A2: EV Charging Policies
        - Measure A3: Administrative Readiness
        - Measure A4: Public Information Programs
    - Goal B: Encourage Ride-Sharing
        - Measure B1: Facilitate Private and Public Mobility Services (Ride-Hailing, Ride-Sharing, Car-Sharing, Bike-Sharing)
    - Goal C: Encourage Transit Usage
        - Measure C1: Expand Transit Network
        - Measure C2: Increase Transit Frequency and Speed
    - Goal D: Adopt Active Transportation Initiatives
        - Measure D1: Provide Traffic Calming Measures
        - Measure D2: Improve Design of Development

    - Goal E: Parking Strategies
        - Measure E1: Limit Parking Supply
        - Measure E2: Unbundle Parking Costs from Property Costs
        - Measure E3: Implement On-Street Market Pricing
    - Goal F: Organizational Strategies
        - Measure F1: Encourage Telecommuting and Alternative Schedules
        - Measure F2: Implement Commute Trip Reduction Programs
    - Goal G: Land Use Strategies
        - Measure G1: Increase Density
        - Measure G2: Increase Diversity
        - Measure G3: Increase Transit Accessibility
        - Measure G4: Integrate Affordable and Below-Market-Rate Housing
        - Measure G5: Integrated Neighborhood Oriented Development Principles
    - Goal H: Digital Technology Strategies
        - Measure H1: Collaborate On and Implement the South Bay Digital Master Plan
- Energy Efficiency
    - Goal A: Increase Energy Efficiency in Existing Residential Units
        - Measure A1: EE Training, Education, and Recognition
        - Measure A2: Increase Participation in Existing EE Programs
        - Measure A3: Establish, Promote or Require Home Energy Evaluations
        - Measure A4: Promote, Incentivize or Require Residential Home Energy Renovations
    - Goal B: Increase Energy Efficiency in New Residential Developments
        - Measures B1: Encourage or Require EE Standards Exceeding Title 24
    - Goal C: Increase Energy Efficiency in Existing Commercial Units
        - Measure C1: Training and Education
        - Measure C2: Increase Participation in Existing EE Programs
        - Measure C3: Incentivize or Require Non-Residential Energy Audits
        - Measure C4: Promote or Require Commercial Energy Audits
    - Goal D: Increase Energy Efficiency in New Commercial Developments
        - Measure D1: Encourage or Require EE Standards Exceeding Title 24
    - Goal E: Increase Energy Efficiency Through Water Efficiency
        - Measure E1: Promote or Require Water Efficiency Through SB X7-7
        - Measure E2: Promoting Water Efficiency Standards Exceeding SB X7-7
    - Goal F: Decrease Energy Demand Through Reducing Urban Heat Island Effect
        - Measure F1: Promote Tree Planting for Shading and Energy Efficiency
        - Measure F2: Incentivize or Require Light-Reflecting Surfaces
    - Goal G: Participate in Education, Outreach and Planning for Energy Efficiency
        - Measure G1: Increase Energy Savings Through the SCE Energy Leader Partnership
    - Goal H: Increase Energy Efficiency in Municipal Buildings
        - Measure H1: Conduct Municipal Energy Audit

        - Measure H2: Implement Water Leak Detection Program
        - Measure H3: Participate in Demand Response Programs
        - Measure H4: Participate in Direction Install Program
        - Measure H5: Adopt a Procurement Policy for EE Equipment
        - Measure H6: Install Cool Roofs
        - Measure H7: Retrofit HVAC Equipment and Water Pumps
        - Measure H8: Track Additional Energy Savings
        - Measure H9: Utilize an Energy Management System
    - Goal I: Increase Energy Efficiency in City Infrastructure
        - Measure I1: Retrofit Traffic Signals and Outdoor Lighting
        - Measure I2: Upgrade or Incorporate Water-Conserving Landscape'
        - Measure I3: Plant Trees for Shade and Carbon Sequestration
- Solid Waste
    - Goal A: Increase Diversion and Reduction of Residential Waste
        - Measure A1: Education and Outreach to The Residents
        - Measure A2: Implement Residential Collection Programs to Increase Diversion of Waste
    - Goal B: Increase Diversion and Reduction of Commercial Waste
        - Measure B1: Education and Outreach to Businesses
        - Measure B2: Implement Commercial Collection Programs to Increase Diversion of Waste
        - Measure B3: Require Commercial Sector to Further Increase Diversion of Waste from Landfills
    - Goal C: Increase Diversion and Reduction of Overall Community Waste
        - Measure C1: Set a Community Goal to Divert Waste from Landfills
    - Goal D: Reduce and Divert Municipal Waste
        - Measure D1: Education and Program for Municipal Employees/Facilities
- Urban Greening
    - Goal A: Increase and Maintain Urban Greening in the Community
        - Measure A1: Increase Community Gardens
        - Measure A2: Increase Rooftop Gardens
        - Measure A3: Support Local Farms
    - Goal B: Increase and Maintain Urban Greening in Municipal Facilities
        - Measure B1: Restoration/Preservation of Landscapes
        - Measure B2: Increase Open Space
- Energy Generation and Storage
    - Goal A: Support Energy Generation and Storage in the Community
        - Measure A1: Community Choice Aggregation
        - Measure A2: Siting and Permitting
        - Measure A3: Policies and Ordinances
        - Measure A4: Education and Outreach
        - Measure A5: Explore Technologies in Municipal Facilities

It should be noted that the CAP is not considered a qualified GHG reduction plan under CEQA that would be the basis for tiering off in environmental analyses like this (see discussion on Page 27 about qualified plans). As such, this technical report does not tier from the 2017 CAP under the provisions of CEQA.

Existing Conditions

Existing Statewide GHG Emissions. GHG emissions are the result of both natural and human-influenced activities. Regarding human-influenced activities, motor vehicle travel, consumption of fossil fuels for power generation, industrial processes, heating and cooling, landfills, agriculture, and wildfires are the primary sources of GHG emissions. Without human intervention, Earth maintains an approximate balance between the emission of GHG emissions into the atmosphere and the storage of GHG emissions in oceans and terrestrial ecosystems. Events and activities, such as the industrial revolution and the increased combustion of fossil fuels (e.g., gasoline, diesel, coal), have contributed to the rapid increase in atmospheric levels of GHG emissions over the last 150 years.

As reported by the CEC, California contributes approximately one percent of global and 8.2 percent of national GHG emissions. California represents approximately 12 percent of the national population. Approximately 80 percent of GHGs in California are CO_2 produced from fossil fuel combustion. The current California GHG inventory compiles statewide anthropogenic GHG emissions and carbon sinks/storage from years 2000 through 2021.[36] It includes estimates for CO_2, CH_4, N_2O, HFCs, PFCs, and SF_6. As shown in Table 5's GHG inventory for California for years 2015 through 2021, the GHG inventory for California in 2021 was 381.3 million $MTCO_2e$.

Table 5
California GHG Inventory
(metric tons of carbon dioxide equivalent [$MTCO_2e$])

	2015	2016	2017	2018	2019	2020	2021
Transportation	161.2	165.0	166.4	165.2	162.3	135.6	145.6
Electric Power	86.3	70.8	64.4	65.0	60.2	59.5	62.4
Industrial	82.7	81.2	81.4	82.0	80.8	73.3	73.9
Commercial & Residential	37.2	37.7	38.3	37.5	40.6	38.9	38.8
Agriculture	32.6	32.1	31.6	32.1	31.3	31.5	30.9
High GWP	18.8	19.4	20.1	20.5	20.7	21.3	21.3
Recycling & Waste	8.1	7.9	8.2	8.3	8.4	8.6	8.4
Total	426.9	414.2	410.4	410.7	404.4	368.7	381.3

Source: California Air Resources Board (2024). California Greenhouse Gas Emission Inventory. Data available at: https://ww2.arb.ca.gov/ghg-inventory-data

[36] A carbon inventory identifies and quantifies sources and sinks of greenhouse gases. Sinks are defined as a natural or artificial reservoir that accumulates and stores some carbon-containing chemical compound for an indefinite period.

Existing Project Site Emissions. The Project Site is improved with five buildings that house commercial uses, including a used car facility and new car dealership. While there are criteria pollutant emissions from the operation of these buildings (e.g., heating and cooling buildings, mobile sources), this analysis does not "credit" the reduction of emissions from these existing uses that would be removed to ensure a conservative analysis of gross GHG emissions associated with the redevelopment of the Project Site.

Methodology

CEQA Guidelines Section 15064.4(a) assist lead agencies in determining the significance of the impacts of GHG emissions, giving them discretion to determine whether to assess impacts quantitatively or qualitatively. It calls for a good-faith effort to describe and calculate emissions. This emissions inventory also demonstrates the reduction in a project's incremental contribution of GHG emissions that results from regulations and requirements adopted as implementation efforts for these plans for the reduction or mitigation of GHG emissions. As such, it provides further justification that a project is consistent with plans adopted for the purpose of reducing and/or mitigating GHG emissions by a project and over time. The significance of a project's GHG emissions impacts is not based on the amount of GHG emissions resulting from that project.

The City, SCAQMD, Office of Planning and Research (OPR), CARB, California Air Pollution Control Officers Association (CAPCOA), and other applicable agencies have not adopted a numerical threshold of significance for assessing impacts related to GHG emissions. As a result, the methodology for evaluating a project's impacts related to GHG emissions focuses on its consistency with statewide, regional, and local plans adopted for the purpose of reducing and/or mitigating GHG emissions.[37] This evaluation is the sole basis pursuant to CEQA for determining the significance of a project's GHG-related impacts on the environment.

Appendix D, Local Actions, of the 2022 Scoping Plan Update includes "recommendations intended to build momentum for local government actions that align with the State's climate goals, with a focus on local GHG reduction strategies (commonly referred to as climate action planning) and approval of new land use development projects, including through environmental review under the California Environmental Quality Act (CEQA)."

The State encourages local governments to adopt a CEQA-qualified CAP addressing the three priority areas (transportation electrification, VMT reduction, and building decarbonization). However, the State recognizes that almost 50 percent of jurisdictions do not have an adopted CAP, among other reasons because they are costly, requiring technical expertise, staffing, funding. Additionally, CAPs need to be monitored and updated as State targets change and new data is available. Jurisdictions that wish to take meaningful climate action (such as preparing a non-CEQA-qualified CAP or as individual measures) aligned with the State's climate goals in the absence of a CEQA-qualified CAP are advised to look to

[37] CEQA Guidelines, Section 14 CCR 15064.4.

the three priority areas when developing local climate plans, measures, policies, and actions: (transportation electrification, VMT reduction, and building decarbonization). “By prioritizing climate action in these three priority areas, local governments can address the largest sources of GHGs within their jurisdiction.”

The State also recognizes in Appendix D, Local Actions, of the Scoping Plan that each community or local area has distinctive situations and local jurisdictions must balance the urgent need for housing[38] while demonstrating that a Project is in alignment with the State’s Climate Goals. The State calls for the climate crisis and the housing crisis to be confronted simultaneously. Jurisdictions should avoid creating targets that are impossible to meet as a basis to determine significance. Ultimately, targets that make it more difficult to achieve statewide goals by prohibiting or complicating projects that are needed to support the State’s climate goals, like infill development, low-income housing or solar arrays, are not consistent with the State’s goals. The State also recognizes the lead agencies’ discretion to develop evidence-based approaches for determining whether a project would have a potentially significant impact on GHG emissions.

The analysis also calculates the amount of GHG emissions from the Project using recommended air quality models. The primary purpose of quantifying the Project’s GHG emissions is to satisfy CEQA Guidelines Section 15064.4(a). The estimated emissions inventory is also used to determine if there would be a reduction in the Project’s incremental contribution of GHG emissions because of compliance with regulations requirements adopted to implement plans for reducing or mitigating GHG emissions. However, the significance of the Project’s GHG emissions is not based on the amount of emissions from the Project.

Consistency with Applicable Plans and Policies

A consistency analysis has been provided that describes the Project’s conflict with applicable plans and policies adopted for the purpose of reducing GHG emissions, included in the applicable portions of CARB’s *Climate Change Scoping Plan* and the 2024-2050 RTP/SCS. In addition, this analysis assesses the Project’s consistency with other plans (e.g., the Climate Action Plan) for informational purposes.[39]

OPR encourages lead agencies to make use of programmatic mitigation plans and programs from which to tier when they perform project analyses. Statewide, the Climate Change Scoping Plan provides measures to achieve AB 32 and SB 32 targets. On a regional level, SCAG’s 2024-2050 RTP/SCS contains measures to achieve VMT reduction required by SB 375. The City does not have a

38 The State recognizes the need for 2.5 million housing units over the next eight years, with one million being affordable units. See page 20, Appendix D, *2022 Scoping Plan Update, November 2022*

39 As noted earlier, the State’s Draft PCAP is intended to be implemented through Statewide or regional programs that would supplement the blueprint in the State’s Scoping Plan and is generally not applicable to development projects in urban or suburban areas.

programmatic mitigation plan from which to tier from, though it has adopted plans to help reduce GHG emissions.

As noted in CEQA Guidelines Section 15064.4(b)(3), consistency with such plans and policies "must reduce or mitigate the project's incremental contribution of greenhouse gas emissions." To demonstrate such incremental reductions, this chapter estimates reductions of project-related GHG emissions resulting from consistency with plans. Consistent with evolving scientific knowledge, approaches to GHG quantification may continue to evolve in the future.

A consistency analysis is provided below that describes the Project's consistency with performance based standards in the applicable parts of CARB's *Climate Change Scoping* Plan and SCAG's 2024-2050 RTP/SCS.

Quantification of Emissions

This analysis quantifies the Project's GHG emissions for information purposes, considering the GHG reduction features that would be incorporated into the Project's design. It relies on the California Emissions Estimator Model® (CalEEMod) is a statewide land use emissions computer model designed to provide a uniform platform for government agencies, land use planners, and environmental professionals to quantify potential criteria pollutant and GHG emissions associated with both construction and operations from a variety of land use projects. CalEEMod was developed in collaboration with the air districts of California, who provided data (e.g., emission factors, trip lengths, meteorology, source inventory) to account for local requirements and conditions. The model is considered by SCAQMD to be an accurate and comprehensive tool for quantifying air quality and GHG impacts from land use projects throughout California.[40]

This analysis quantifies the Project's emissions and compares them to a Project without Reduction Features scenario, as defined by CARB's most updated projections for AB 32 and SB 32. This comparison is included for informational purposes to disclose the relative carbon efficiency of the Project and to determine if there would be a reduction in the Project's incremental contribution of GHG emissions based on compliance with regulations and requirements adopted to implement plans for reducing GHG emissions. The Project Without Reduction Features scenario does not consider site-specific conditions, Project design features, or prescribed mitigation measures. This approach is consistent with the concepts used in the CARB's *Climate Change Scoping Plan* for the implementation of AB 32. This methodology is used to analyze consistency with applicable GHG reduction plans and policies and demonstrate the efficacy of the measures contained therein, but it is not a threshold of significance. The Project Without Reduction Features scenario is similar to the approach currently used by the City with respect to evaluating a proposed development project's consistency with CARB's Scoping Plans. Currently, the City evaluates the proposed project under two scenarios—one scenario without GHG reduction measures (akin to the Project Without Reduction Features scenario) and a second scenario with GHG reduction measures.

[40] California Air Pollution Control Officers Association, California Emissions Estimator Model, CalEEMod™, www.caleemod.com, accessed November 2023.

The Project without Reduction Features scenario also does not account for energy efficiency measures that would go beyond Title 24 building standards or trip reductions from the co-location of uses and availability of public transit. However, the Project without Reduction Features does consider regulatory measures included in CARB's *Climate Change Scoping Plan* and SCAG's 2024-2050 RTP/SCS.

Project GHG Emissions

The California Climate Action Registry (Climate Registry) General Reporting Protocol provides basic procedures and guidelines for calculating and reporting GHG emissions from a number of general and industry-specific activities.[41] The General Reporting Protocol is based on the "Greenhouse Gas Protocol: A Corporate Accounting and Reporting Standard" developed by the World Business Council for Sustainable Development and the World Resources Institute through "a multi-stakeholder effort to develop a standardized approach to the voluntary reporting of GHG emissions."[42] Although no numerical thresholds of significance have been developed, and no specific protocols are available for land use projects, the General Reporting Protocol provides a basic framework for calculating and reporting GHG emissions from the project. The information provided in this section is consistent with the General Reporting Protocol's reporting requirements.

The General Reporting Protocol recommends the separation of GHG emissions into three categories that reflect different aspects of ownership or control over emissions. They include the following:

- Scope 1: Direct, onsite combustion of fossil fuels (e.g., natural gas, propane, gasoline, and diesel).
- Scope 2: Indirect, offsite 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 (e.g., energy used to convey, treat, and distribute water and wastewater).[43]

The General Reporting Protocol provides a range of basic calculations methods. However, the General Reporting Protocol calculations are typically designed for existing buildings or facilities. These retrospective calculation methods are not directly applicable to planning and development situations where buildings do not yet exist.

CARB recommends consideration of indirect emissions to provide a more complete picture of the GHG emissions footprint of a facility. Annually reported indirect energy usage aids the conservation awareness of a facility and provides information to CARB to be considered for future strategies.[44] For example, CARB has proposed requiring the calculation of direct and indirect GHG emissions as part of

41 California Climate Action Registry, General Reporting Protocol Version 3.1, January 2009.

42 Ibid.

43 Embodied energy is a scientific term that refers to the quantity of energy required to manufacture and supply to the point of use a product, material, or service.

44 California Air Resources Board, Initial Statement of Reasons for Rulemaking, Proposed Regulation for Mandatory Reporting of Greenhouse Gas Emissions Pursuant to the California Global Warming Solutions Act of 2006 (AB 32), Planning and Technical Support Division Emission Inventory Branch, October 19, 2007.

the AB 32 reporting requirements. Additionally, OPR has noted that lead agencies "should make a good-faith effort, based on available information, to calculate, model, or estimate… GHG emissions from a project, including the emissions associated with vehicular traffic, energy consumption, water usage and construction activities."[45] Therefore, direct and indirect emissions have been calculated for the Project.

A fundamental difficulty in the analysis of GHG emissions is the global nature of the existing and cumulative future conditions. Changes in GHG emissions can be difficult to attribute to a particular planning program or project because the planning effort or project may cause a shift in the locale for some type of GHG emissions, rather than causing "new" GHG emissions. As a result, there is an inability to conclude whether a project's GHG emissions represent a net global increase, reduction, or no change in GHG emissions that would exist if the project were not implemented. The analysis of the Project's GHG emissions is particularly conservative in that it assumes all the GHG emissions are new additions to the atmosphere.

Construction

The Project's construction emissions were calculated using CalEEMod Version 2022.1.1.26. Details of the modeling assumptions and emission factors are provided in the Technical Appendix. CalEEMod calculates emissions from off-road equipment usage and on-road vehicle travel associated with haul, delivery, and construction worker trips. GHG emissions during construction were forecasted based on the proposed construction schedule and included the mobile- source and fugitive dust emissions factors derived from CalEEMod.

The calculations of the emissions generated during Project construction activities reflect the types and quantities of construction equipment that would be used to remove existing pavement, grade, and excavate the Project Site; construct the proposed building and related improvements; and plant new landscaping within the Project Site.

In accordance with SCAQMD's guidance, GHG emissions from construction were amortized (i.e., averaged annually) over the lifetime of the Project. Because emissions from construction activities occur over a relatively short-term period, they contribute a relatively small portion of the overall lifetime GHG emissions for the Project. In addition, GHG emissions reduction measures for construction equipment are relatively limited. Thus, SCAQMD recommends that construction emissions be amortized over a 30-year project lifetime, so that GHG emissions reduction measures will address construction GHG emissions as part of the operational GHG reduction strategies.[46] As a result, the Project's total construction GHG emissions were divided by 30 to determine an approximate annual construction emissions estimate comparable to operational emissions.

Operation

Similar to construction, CalEEMod is used to calculate potential GHG emissions generated by new land uses on the Project Site, including area sources, electricity, natural gas, mobile sources, stationary

45 OPR Technical Advisory, p. 5.

46 SCAQMD Governing Board Agenda Item 31, December 5, 2008.

sources (i.e., emergency generators), solid waste generation and disposal, and water usage/wastewater generation.

Area source emissions include landscaping equipment that are based on the size of the land uses (e.g., square footage or dwelling unit), the GHG emission factors for fuel combustion, and the global warming potential (GWP) values for the GHG emissions emitted.[47]

GHG emissions associated with electricity demand are based on the size of the land uses, the electrical demand factors for the land uses, the GHG emission factors for the electricity utility provider, and the GWP values for the GHG emissions emitted. As with electricity, the emissions of GHG emissions associated with natural gas combustion are based on the size of the land uses, the natural gas combustion factors for the land uses in units of million British thermal units (MMBtu), the GHG emission factors for natural gas combustion, and the GWP values for the GHG emissions emitted.[48]

Mobile source GHG emissions are calculated based on an estimate of the Project's annual VMT, which is derived using CalEEMod based on the trip generation provided in the Transportation Study prepared for the Project. The CalEEMod-derived VMT values account for the daily and seasonal variations in trip frequency and length associated with new employee and visitor trips to and from the Project Site and other activities that generate a vehicle trip.

Stationary source GHG emissions are based on proposed stationary sources (i.e., emergency generators) that would be provided on the Project Site.

GHG emissions associated with solid waste disposal are based on the size of the Project's proposed land uses, the waste disposal rate for the land uses, the waste diversion rate, the GHG emission factors for solid waste decomposition, and the GWP values for the GHG emissions emitted.

GHG emissions related to water usage and wastewater generation are based on the size of the land uses, the water demand factors, the electrical intensity factors for water supply, treatment, and distribution, electrical intensity factors for wastewater treatment, the GHG emission factors for the electricity utility provider, and the GWP values for the GHG emissions emitted.

The analysis of Project GHG emissions at buildout uses assumptions in CARB's EMFAC2021 model (1.0.1) and considers actions and mandates expected to be in force in 2026 (e.g., Pavley I Standards, full implementation of California's 33 percent RPS by 2030 and 50 percent by 2050 and the California LCFS). In addition, because mobile source GHG emissions are directly dependent on the number of vehicle trips, a decrease in the number of project-generated trips because of project features (e.g., proximity to transit) would provide a proportional reduction in mobile source GHG emissions compared to a generic project without such locational benefits. Calculation of Project GHG emissions

47 In 2021, CARB adopted regulations requiring that all small (25 horsepower and below) spark-ignited off-road engines (e.g., lawn and gardening equipment) be zero emission starting in model year 2024. Standards for portable generators and large pressure washers are given until model year 2028 to be electric-powered.

48 Energy consumption estimates with CalEEMod 2022.1.1.26 are based on the California Energy Commission's 2020 Residential Appliance Saturation Survey (residential uses) and 2021 Commercial Forecast database, both of which reflected the 2019 Title 24 energy efficiency standards. These energy consumption estimates were adjusted to reflect the 2022 Title 24 standards that cumulatively produce a 0.49 percent reduction in electricity use and 0.45 percent reduction in natural gas use when compared to the 2019 standards.

conservatively did not include actions and mandates that are not already in place but are expected to be enforced in 2026 (e.g., Pavley II, which could further reduce GHG emissions from use of light-duty vehicles by 2.5 percent). Similarly, emissions reductions regarding Cap-and-Trade were not included in this analysis as they applied to other future reductions in non-transportation sectors. As for the Cap-and-Trade program's benefits for the transportation sector, the analysis utilizes CARB's assumptions in EMFAC2021 for any short-term reductions in GHG emissions. By not speculating on potential regulatory conditions, the analysis takes a conservative approach that likely overestimates the Project's GHG emissions at buildout, because the state is expected to implement several policies and programs aimed at reducing GHG emissions from the land use and transportation sectors to meet the state's long-term climate goals.

There are no GHG emissions thresholds adopted by the SCAQMD that are applicable to the Project. In 2008, SCAQMD released draft guidance regarding interim CEQA GHG significance thresholds.[49] Within its October 2008 document, the SCAQMD proposed the use of a percent emission reduction target to determine significance for commercial/residential projects that emit greater than 3,000 $MTCO_2e$ per year. Under this proposal, such commercial and residential projects would have been assumed to have a less than significant impact on climate change. However, this proposed screening threshold was not adopted by the SCAQMD.

Consistency with Applicable Plans and Policies

A consistency analysis has been provided that describes the Project's compliance with or exceedance of performance-based standards, and consistency with applicable plans and policies adopted for the purpose of reducing GHG emissions, included in the applicable portions of the *Climate Change Scoping Plan* and the 2024-2050 RTP/SCS.

As part of the *Climate Change Scoping Plan*, a statewide emissions inventory was developed as required by AB 32 which directs CARB to develop and track GHG emissions reductions to document progress towards the state GHG target. The emissions inventory also considers GHG emissions reduction measures developed by CARB to achieve state targets. Consistency with the *Climate Change Scoping Plan* is evaluated by comparing the Project's GHG reduction measures to those contained in the Scoping Plan.

As noted in CEQA Guidelines Section 15064.4(b)(3), consistency with such plans and policies "must reduce or mitigate the project's incremental contribution of greenhouse gas emissions." To demonstrate such incremental reductions, this chapter estimates reductions of project-related GHG emissions resulting from consistency with plans. Consistent with evolving scientific knowledge, approaches to GHG quantification may continue to evolve in the future.

While there are many ways to quantify the efficiency of the GHG reduction measures provided for in the plans and policies, this analysis compares the Project's GHG emissions to the emissions that would be generated by the Project in the absence of any GHG reduction measures (i.e., the Project Without

Reduction Features scenario. This approach is consistent with the concepts used in CARB's 2017 Climate Change Scoping Plan. This methodology is used to analyze consistency with applicable GHG reduction plans and policies and demonstrate the efficacy of the measures contained therein, but it is not a threshold of significance.

The analysis in this section includes potential emissions under a Project Without Reduction Features scenarios and from the Project at build-out based on actions and mandates expected to be in force in 2026. Early-action measures identified in the Climate Change Scoping Plan that have not been approved were not credited in this analysis. By not speculating on potential regulatory conditions, the analysis takes a conservative approach that likely overestimates the Project's GHG emissions at build-out. The Project Without Reduction Features scenario is used to establish a comparison with project-generated GHG emissions. The Project Without Reduction Features scenario does not consider site-specific conditions, project design features, or prescribed mitigation measures. As an example, a Project Without Reduction Features scenario would apply a base ITE trip-generation rate for the project and would not consider site-specific benefits resulting from the proximity to public transportation.

Thresholds of Significance

State CEQA Guidelines Appendix G

In accordance with Appendix G of the State CEQA Guidelines (Appendix G), a project would have a significant impact related to GHG emissions if the project would do the following:

a) Generate GHG emissions, either directly or indirectly, that may have a significant impact on the environment;

b) Conflict with any applicable plan, policy or regulation of an agency adopted for the purpose of reducing the emissions of GHG emissions.

The Project would comply with all applicable state and local regulatory requirements, including the provisions set forth in the City's Building Ordinance. Furthermore, the Project would also include sustainability features related to water conservation and waste reduction.

Project Impacts

Consistency with Applicable Plans and Policies

The discussion below describes the extent the Project complies with or exceeds the performance-based standards included in the regulations outlined in the *Climate Change Scoping Plan* and the 2024-2050 RTP/SCS, each of which identify GHG-reducing measures that directly and indirectly apply to the Proposed Project. This analysis also evaluates the Project's consistency with City plans and programs that generally address climate change. As shown herein, the Project would be consistent with the applicable GHG reduction plans and policies.

Statewide: Climate Change Scoping Plan

As discussed above, jurisdictions that want to take meaningful climate action (such as preparing a non-CEQA-qualified CAP or as individual measures) aligned with the State's climate goals in the absence of a CEQA-qualified CAP should also look to the three priority areas (transportation electrification, VMT reduction, and building decarbonization). To assist local jurisdictions, the 2022 Scoping Plan Update presents a non-exhaustive list of impactful GHG reduction strategies that can be implemented by local governments within the three priority areas (Priority GHG Reduction Strategies for Local Government Climate Action Priority Areas).[50] A detailed assessment of goals, plans, policies implemented by the City which would support the GHG reduction strategies in the three priority areas is provided below. In addition, further details are provided regarding the correlation between these reduction strategies and applicable actions included in Table 2-1 (page 72) of the Scoping Plan (Actions for the Scoping Plan Scenario).

Transportation Electrification

The priority GHG reduction strategies for local government climate action related to transportation electrification are discussed below and would support the Scoping Plan action to have 100 percent of all new passenger vehicles to be zero-emission by 2035 (see Table 2-1 of the Scoping Plan).

- **Convert local government fleets to zero-emission vehicles (ZEV)**

CARB approved the Advanced Clean Cars II rule which codifies Executive Order N-79-20 and requires 100 percent of new cars and light trucks sold in California be zero-emission vehicles by 2035. The State has also adopted AB 2127, which requires the CEC to analyze and examine charging needs to support California's EVs in 2030. This report would help decision-makers allocate resources to install new EV chargers where they are needed most.

On April 18, 2023, the City adopted a Zero-Emission Bus Rollout Plan that calls for a full transition to zero-emission buses by 2032. This was to include purchasing four battery-electric buses by 2032 to replace compressed natural gas and diesel buses and did not involve early retirement of conventional transit buses. In March 2021, the City also approved a FY 23/24 vision for a multi-year fleet replacement plan that prioritizes the transition to electric vehicles. This includes developing a plan to transition some diesel- and gas-powered equipment to electric technology.

The City's goals of converting the municipal fleet to zero emissions would be consistent with the Scoping Plan goals of transitioning to EVs. Although this measure mainly applies to City fleets, the Project would not conflict with these goals by installing EV charging stations and pre-wiring other spaces for future charging facilities.

[50] Table 1 of Appendix D, 2022 Scoping Plan Update, November 2022.

- **Create a jurisdiction-specific ZEV ecosystem to support deployment of ZEVs statewide (such as building standards that exceed state building codes, permit streamlining, infrastructure siting, consumer education, preferential parking policies, and ZEV readiness plans)**

The State has adopted AB 1236 and AB 970, which require cities to adopt streamline permitting procedures for EV charging stations. As a result, the City uses the CALGreen 2022 requirements of 20 percent of new parking spaces as EV capable. The ordinance also requires new construction to install EVSE at 10 percent of total parking spaces. This requirement also exceeds the CALGreen 2022 requirements of installing electric vehicle supply equipment (EVSE) for 25 percent of EV capable parking spaces.

The City also has committed to modifications to its Corporate Yard to facilitate the bus fleet's transition to zero-emission vehicles. This included new electric charging stations at its municipal facility at 18601 South Main Street by 2025.

The City's goals of installing EV chargers throughout the City and at its Corporate Yard would be consistent with the Scoping Plan goals of transitioning to EVs. The Project would contribute to this by installing EV charging stations and pre-wiring other spaces for future charging facilities.

VMT Reduction

The priority GHG reduction strategies for local government climate action related to VMT reduction are discussed below and would support the Scoping Plan action to reduce VMT per capita 25 percent below 2019 levels by 2030 and 30 percent below 2019 levels by 2045.

- **Reduce or eliminate minimum parking standards in new developments**

- **Implement parking pricing or transportation demand management pricing strategies**

The CAP includes a number of policies that would advance these parking strategies that would reduce VMT. This includes a policy that reduces or eliminates parking minimums in new development (Policy LUT: E1.1) and another that reduces or eliminates parking minimums for mixed-use, pedestrian, and transit-oriented development. This also includes policies calling for free parking for electric vehicles (Policy LUT: A1.1) and lower parking minimums for projects providing electric vehicle parking (Policy LUT: A1.3). The CAP also calls for unbundling parking from property costs (Policy LUT: E2.1) and implementing on-street market pricing (LUT: E3.1).

While the State calls for the City to implement these Citywide policies, the Project would not conflict with this reduction strategy to reduce parking standards.

- **Implement Complete Streets policies and investments, consistent with general plan circulation element requirements**

Carson developed a Complete Streets and Green Streets Policy in May 2022 that call for balanced infrastructure investments that support active transportation and public transit. The City adopted an Active Transportation Plan in June 2015 calls for creation of citywide pedestrian neighborhoods, bicycle infrastructure, and transit improvements that would advance Complete Streets policies.

This reduction strategy mainly applies to infrastructure investments that address traffic circulation. Nevertheless, the Project would not conflict with implementation of Complete Streets policies.

- **Increase access to public transit by increasing density of development near transit, improving transit service by increasing service frequency, creating bus priority lanes, reducing or eliminating fares, microtransit, etc.**

- **Increase public access to clean mobility options by planning for and investing in electric shuttles, bike share, car share, and walking**

- **Amend zoning or development codes to enable mixed-use, walkable, transit-oriented, and compact infill development (such as increasing the allowable density of a neighborhood)**

- **Preserve natural and working lands by implementing land use policies that guide development toward infill areas and do not convert "greenfield" land to urban uses (e.g., green belts, strategic conservation easements).**

These reduction strategies are supported through implementation of SB 375 which requires integration of planning processes for transportation, land-use and housing and generally encourages jobs/housing proximity, promote transit-oriented development (TOD), and encourages high-density residential/ commercial development along transit corridors. To implement SB 375 and reduce GHG emissions by correlating land use and transportation planning, SCAG adopted the 2020–2045 RTP/SCS, also referred to as Connect SoCal. The 2020–2045 RTP/SCS' "Core Vision" prioritizes the maintenance and management of the region's transportation network, expanding mobility choices by co-locating housing, jobs, and transit, and increasing investment in transit and complete streets.

The Project is an infill development in an urbanized area that would concentrate new development consistent with the growth pattern encouraged in the RTP/SCS. The Project's convenient access to public transit and opportunities for walking and biking would reduce vehicle trips, VMT, and GHG emissions. The Project Site's proximity to commercial uses and services would encourage residents to walk to nearby destinations to meet their shopping needs, thereby reduce VMT and GHG emissions. Therefore, the Project would be consistent with these reduction strategies.

California continues to experience a severe housing shortage. The State must plan for more than 2.5 million residential units over the next eight years, and no less than one million of those residential units

must be affordable to lower-income households.[51] This represents more than double the housing planned for during the last eight years.[52] The housing crisis and the climate crisis must be confronted simultaneously, and it is possible to address the housing crisis in a manner that supports the State's climate and regional air quality goals.[53] CAPCOA's Handbook for Analyzing Greenhouse Gas Emission Reductions, Assessing Climate Vulnerabilities, and Advancing Health and Equity (CAPCOA's Handbook) provides a VMT reduction measurement for incorporation of low-income housing. Measure T-4 (Integrate Affordable and Below Market Rate Housing) shows a 28.6 percent reduction in VMT for low-income units in comparison to market rate units.

As discussed above, the City's Housing Element of the General Plan provides planning guidance in meeting housing needs identified in the SCAG Regional Housing Needs Assessment (RHNA). The Housing Element identifies measures to encourage development of affordable housing such as revising density bonuses for affordable housing; identify locations which are ideal for funding programs to meet low-income housing goals; and rezone areas to encourage low-income housing. The Housing Element estimates that implementation of these measures would increase housing production at all income ranges compared to previous cycles.

The Project would expand the supply and diversity of housing in the City of Carson by including 29 affordable units. Further, the Project's location in an urbanized area with access to transportation alternatives would help support reduced car ownership that can help reduce living costs and further the City's goals for promoting affordable housing.

Building Decarbonization

The priority GHG reduction strategies for local government climate action related to electrification are discussed below and would support the Scoping Plan actions regarding meeting increased demand for electrification without new fossil gas-fire resources and all electric appliances beginning in 2026 (residential) and 2029 (commercial) (see Table 2-1 of the Scoping Plan).

- **Adopt all-electric new construction reach codes for residential and commercial uses**

California's transition away from fossil fuel–based energy sources will bring the project's GHG emissions associated with building energy use down to zero as our electric supply becomes 100 percent carbon free. California has committed to achieving this goal by 2045 through SB 100, the 100 Percent Clean Energy Act of 2018. SB 100 strengthened the State's Renewables Portfolio Standard (RPS) by requiring that 60 percent of all electricity provided to retail users in California come from renewable sources by 2030 and that 100 percent come from carbon-free sources by 2045. The land use sector will benefit

[51] California Department of Housing and Community Development. 2022. Statewide Housing Plan. Available at www.hcd.ca.gov/docs/statewide-housing-plan.pdf.

[52] Ibid.

[53] Elkind, E. N., Galante, C., Decker, N., Chapple, K., Martin, A., & Hanson, M. 2017. Right Type, Right Place: Assessing the Environmental and Economic Impacts of Infill Residential Development through 2030. Available at https://ternercenter.berkeley.edu/research-and-policy/right-type-right-place/.

from RPS because the electricity used in buildings will be increasingly carbon-free, but implementation does not depend (directly, at least) on how buildings are designed and built.

The City has updated the Building Code with requirements for all new buildings which will reduce GHG emissions related to natural gas combustion. Space heating, water heating and cooking for non-restaurant uses would be required to be powered by electricity. In future years, SCE will be required to increase the amount of renewable energy in the power mix to comply with SB 100 requirements. The increasing availability of renewable energy will serve to reduce GHG emissions from sources traditionally powered by natural gas. Therefore, the Project would be consistent with the Building Code and not conflict with State and local decarbonization objectives.

- **Adopt policies and incentive programs to implement energy efficiency retrofits for existing buildings, such as weatherization, lighting upgrades, and replacing energy-intensive appliances and equipment with more efficient systems (such as Energy Star-rated equipment and equipment controllers)**

This reduction strategy would support the Scoping Plan action regarding electrification of appliances in existing residential buildings (see Table 2-1 of the Scoping Plan). The City and SCE have established rebate programs to promote use of energy-efficient products and home upgrades.

While the Project would not involve retrofit of existing buildings, it would design the HVAC system to be compliant with Title 24 and green building codes for energy efficiency.

Table 6 evaluates the Project's consistency with applicable reduction actions/strategies by emissions source category outlined in the *2022 Climate Change Scoping Plan Update*.[54] When compared to SB 32, the Proposed Project would be consistent with its objectives and the GHG reduction-related actions and strategies of the 2022 Scoping Plan. Table 6 confirms that the Proposed Project is consistent with the Scoping Plan's focus on increasing renewable energy use, imposing tighter limits on the carbon content of gasoline and diesel fuel, putting more electric cars on the road, improving energy efficiency, and curbing emissions from key industries. Although a number of these strategies are currently promulgated, some have not yet been formally proposed or adopted. It is expected that these measures or similar actions to reduce GHG emissions will be adopted as required to achieve statewide GHG emissions targets. Based on the following analysis, the Project would be consistent with the State's Climate Change Scoping Plan's objective of achieving carbon neutrality statewide by 2045 and reducing 2030 GHG emissions in accord with SB 32.

Based on the analysis in Table 6, the Project would be consistent with the State's 2022 Climate Change Scoping Plan and, thus, impacts related to consistency with the Scoping Plan would be less than significant impact.

54 An evaluation of stationary sources is not necessary as the stationary sources emissions will be created by emergency generators that would only be used in an emergency.

Table 6
Consistency Analysis—2022 Scoping Plan Update

Sector	Actions and Strategies	Statutes, Executive Orders, Other Direction	Project Consistency Analysis
Smart Growth / Vehicle Miles Traveled (VMT)	VMT per capita reduced 25% below 2019 levels by 2030, and 30% below 2019 levels by 2045	SB 375: Reduce demand for fossil transportation fuels and GHG	**No Conflict.** The Project represents an infill development within an urbanized area that would concentrate new residences within an HQTA and reduce per capita VMT and GHG emissions. The Project would be consistent with SB 375 and its VMT reduction goals, as well as the GHG and transportation goals of the 2024-2050 RTP/SCS.
Light-duty Vehicle (LDV) Zero Emission Vehicles (ZEVs)	100% of Light Duty Vehicle sales are ZEV by 2035	EO N-79-20: Reduce demand for fossil transportation fuels and GHGs, and improve air quality. In November 2022, the Advanced Clean Cars II regulations took effect, setting ZEV and plug-in hybrid vehicle sales requirements for model years 2026 to 2035 (ZEV program) and increasingly stringent emission standards (LEV program) to ensure automakers phase out sales of internal combustion engine vehicles.	**No Conflict.** Emissions from vehicle engines from the Project would be regulated by State regulations governing technology and cleaner emissions.
Truck ZEVs	100% of medium-duty (MDV)/HDV sales are ZEV by 2040 (AB 74 University of California Institute of Transportation Studies [ITS] report)	EO N-79-20: Reduce demand for fossil transportation fuels and GHGs, and improve air quality. CARB's Advanced Clean Truck Regulation accelerates the transition of zero-emission medium- and heavy-duty vehicles from 2024 to 2035. CARB also adopted the Innovative Clean Transit measure in 2018 that requires all public transit agencies to transition to zero emission fleets.	**No Conflict.** While the Project would not generate substantial medium- and heavy-duty truck traffic, it would not impede the advancement of cleaner trucks over time.

Table 6
Consistency Analysis—2022 Scoping Plan Update

Sector	Actions and Strategies	Statutes, Executive Orders, Other Direction	Project Consistency Analysis
Aviation	20% of aviation fuel demand is met by electricity (batteries) or hydrogen (fuel cells) in 2045. Sustainable aviation fuel meets most or the rest of the aviation fuel demand that has not already transitioned to hydrogen or batteries.	CARB focuses on reducing emissions from ground support equipment and airport transit vehicles. It is also working with national and international entities to tighten aircraft emission standards. AB 197: direct emissions reductions for sources covered by the AB 32 Inventory	**No Conflict.** While the Project would not directly impact aviation industry, it would not impede the advancement of a cleaner aviation industry over time.
Ocean-going Vessels (OGVs)	2020 OGV At-Berth regulation fully implemented, with most OGVs utilizing shore power by 2027. 25% of OGVs utilize hydrogen fuel cell electric technology by 2045.	AB 197: direct emissions reductions for sources covered by the AB 32 Inventory In 2015, Executive Order B-32-15 called. For a less polluting freight transport system that addressed OGVs, transport refrigeration units, and clean trucks.	**No Conflict.** While the Project would not directly impact trade or OGVs, it would not impede the advancement of a cleaner on- or off-shore sources over time.
Port Operations	100% of cargo handling equipment is zero-emission by 2037. 100% of drayage trucks are zero emission by 2035.	Executive Order N-79-20: Reduce demand for petroleum fuels and GHGs, and improve air quality. AB 197: direct emissions reductions for sources covered by the AB 32 Inventory. In 2015, Executive Order B-32-15 called. For a less polluting freight transport system that addressed OGVs, transport refrigeration units, and clean trucks.	**No Conflict.** While the Project would not directly impact trade or port operations, it would not impede the advancement of a cleaner on-shore sources over time.
Freight and Passenger rail	100% of passenger and other locomotive sales are ZEV by 2030. 100% of line haul locomotive sales are ZEV by 2035. Line haul and passenger rail rely primarily on hydrogen fuel cell technology, and others primarily utilize electricity.	AB 197: direct emissions reductions for sources covered by the AB 32 Inventory In 2015, Executive Order B-32-15 called. For a less polluting freight transport system that addressed OGVs, transport refrigeration units, and clean trucks.	**No Conflict.** While the Project would not directly impact freight or passenger rail, it would not impede the advancement of a cleaner locomotives over time. The Project's land uses would not include freight transportation or warehousing that would be subject to the California Sustainable Freight

Table 6
Consistency Analysis—2022 Scoping Plan Update

Sector	Actions and Strategies	Statutes, Executive Orders, Other Direction	Project Consistency Analysis
			Action Plan. Therefore, the Project would not interfere or impede the implementation of the Sustainable Freight Action Plan.
Oil and Gas Extraction	Reduce oil and gas extraction operations in line with petroleum demand by 2045.	AB 197: direct emissions reductions for sources covered by the AB 32 Inventory	**No Conflict.** While the Project would not directly impact oil extraction, it would help reduce demand for petroleum products from energy, area, and mobile sources.
Petroleum Refining	CCS on majority of operations by 2030, beginning in 2028 Production reduced in line with petroleum demand.	AB 197: direct emissions reductions for sources covered by the AB 32 Inventory	**No Conflict.** While the Project would not directly impact oil extraction, it would help reduce demand for petroleum products that require refining.
Electricity Generation	Sector GHG target of 38 $MMTCO_2e$ in 2030 and 30 $MMTCO_2e$ in 2035. Retail sales load coverage 20 gigawatts (GW) of offshore wind by 2045. Meet increased demand for electrification without new fossil gas-fired resources.	SB 350 and SB 100: Reduce GHGs and improve air quality. AB 197: direct emissions reductions for sources covered by the AB 32 Inventory	**No Conflict.** The Project would not directly impact the sources of electricity generation.
New Residential and Commercial Buildings	All electric appliances beginning 2026 (residential) and 2029 (commercial), contributing to 6 million heat pumps installed statewide by 2030.	AB 197: direct emissions reductions for sources covered by the AB 32 Inventory	**No Conflict.** The Project would incorporate appliances that are consistent with Title 24 and Green Building requirements and consistent with the reduction of residential energy use.
Existing Residential Buildings	80% of appliance sales are electric by 2030 and 100% of appliance sales are electric by 2035. Appliances are replaced at end of life such that by 2030 there are 3 million all-electric and	AB 197: direct emissions reductions for sources covered by the AB 32 Inventory	**No Conflict.** The Project would comply with Title 24 and Green Building requirements during construction and any future retrofit or appliance replacement requirements.

Table 6
Consistency Analysis—2022 Scoping Plan Update

Sector	Actions and Strategies	Statutes, Executive Orders, Other Direction	Project Consistency Analysis
	electric-ready homes—and by 2035, 7 million homes—as well as contributing to 6 million heat pumps installed statewide by 2030.		
Existing Commercial Buildings	80% of appliance sales are electric by 2030, and 100% of appliance sales are electric by 2045. Appliances are replaced at end of life, contributing to 6 million heat pumps installed statewide by 2030.	AB 197: direct emissions reductions for sources covered by the AB 32 Inventory	**No Conflict.** While the Project is not a commercial development, it would not interfere with any future requirements to retrofit commercial appliances.
Food Products	7.5% of energy demand electrified directly and/or indirectly by 2030; 75% by 2045	AB 197: direct emissions reductions for sources covered by the AB 32 Inventory	**No Conflict.** The Project would not directly impact the sources of energy for food production.
Construction Equipment	25% of energy demand electrified by 2030 and 75% electrified by 2045	AB 197: direct emissions reductions for sources covered by the AB 32 Inventory	**No Conflict.** The Project would not directly impact the sources of energy for construction equipment.
Chemicals and Allied Products; Pulp and Paper	Electrify 0% of boilers by 2030 and 100% of boilers by 2045. Hydrogen for 25% of process heat by 2035 and 100% by 2045 Electrify 100% of other energy demand by 2045.	AB 197: direct emissions reductions for sources covered by the AB 32 Inventory	**No Conflict.** The Project would not directly impact the sources of energy for boilers.
Stone, Clay, Glass, and Cement	CCS on 40% of operations by 2035 and on all facilities by 2045 Process emissions reduced through alternative materials and CCS	SB 596: Reduce demand for fossil energy, process emissions, and GHGs, and improve air quality. AB 197: direct emissions reductions for sources covered by the AB 32 Inventory	**No Conflict.** The Project would not directly impact the sources of energy for stone, clay, glass, and cement facilities.
Other Industrial Manufacturing	0% energy demand electrified by 2030 and 50% by 2045	AB 197: direct emissions reductions for sources covered by the AB 32 Inventory	**No Conflict.** The Project would not directly impact the sources of energy for industrial facilities.

Table 6
Consistency Analysis—2022 Scoping Plan Update

Sector	Actions and Strategies	Statutes, Executive Orders, Other Direction	Project Consistency Analysis
Combined Heat and Power	Facilities retire by 2040.	AB 197: direct emissions reductions for sources covered by the AB 32 Inventory	**No Conflict.** The Project would not affect facilities that produced heat and power.
Agriculture Energy Use	25% energy demand electrified by 2030 and 75% by 2045	AB 197: direct emissions reductions for sources covered by the AB 32 Inventory	**No Conflict.** The Project would not affect directly agricultural sources of energy.
Low Carbon Fuels for Transportation	Biomass supply is used to produce conventional and advanced biofuels, as well as hydrogen.	AB 197: direct emissions reductions for sources covered by the AB 32 Inventory In November 2022, the Advanced Clean Cars II regulations took effect, setting low emission standards for transportation.	**No Conflict.** This regulatory program applies to fuel suppliers, not directly to land use development. GHG emissions related to vehicular travel associated with the Project would benefit from this regulation because fuel used by Project-related vehicles would be required to comply with the LCFS. Mobile source GHG emissions estimates were calculated using CalEEMod that includes implementation of the LCFS into mobile source emission factors. The current LCFS targets a 20% reduction in CI from a 2010 baseline by 2030. GHG emissions generated by Project-related vehicular travel would benefit from the Advanced Clean Cars Program.
Low Carbon Fuels for Buildings and Industry	In 2030s biomethane blended in pipeline Renewable hydrogen blended in fossil gas pipeline at 7% energy (~20% by volume), ramping up between 2030 and 2040 In 2030s, dedicated hydrogen pipelines constructed to serve certain industrial clusters	SB 350: The Clean Energy and Pollution Reduction Act of 2015 increases the standards of the California 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. Required measures include increasing RPS to 50 percent of retail sales by 2030, establishing annual	**No Conflict.** The Project would comply with this this action/strategy being located within the SCE and SCG service area and would comply with CalGreen and Title 24 energy efficiency standards. SCE must generate electricity that would increase renewable energy resources

Table 6
Consistency Analysis—2022 Scoping Plan Update

Sector	Actions and Strategies	Statutes, Executive Orders, Other Direction	Project Consistency Analysis
		targets for statewide energy efficiency that achieve a cumulative doubling of statewide energy efficiency savings in electricity and natural gas end uses by 2030. SB 100: The California Renewables Portfolio Standard Program (2018) 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 requires local publicly owned electric utilities to procure a minimum quantity of electricity from renewable energy resources of 44 percent of retail sales by December 31, 2024 and 60 percent by December 31, 2030.	to 33 percent by 2020 and 50 percent by 2030. As SCE would provide electricity service to the Project Site, by 2030 the Project would use electricity consistent with the requirements of SB 350. As required under SB 350, doubling of the energy efficiency savings from retail customers by 2030 would primarily rely on the existing suite of building energy efficiency standards under CCR Title 24, Part 6 (consistency with this regulation is discussed below) and utility-sponsored programs such as rebates for high-efficiency appliances, HVAC systems, and insulation.
Non-combustion Methane Emissions	Increase landfill and dairy digester methane capture. Some alternative manure management deployed for smaller dairies Moderate adoption of enteric strategies by 2030 Divert 75% of organic waste from landfills by 2025. Oil and gas fugitive methane emissions reduced 50% by 2030 and further reductions as infrastructure components retire in line with reduced fossil gas demand	SB 1383 (2016) requires CARB to set 2030 emission reduction targets of 40 percent for methane and hydrofluorocarbons and 50 percent black carbon emissions below 2013 levels. The Project would comply with the CARB SLCP Reduction Strategy by using HVAC equipment with lower GWP refrigerants.	**No Conflict.** This program applies to State regulators looking to reduce methane emissions from landfill and dairy facilities and is not directly related to development of the Project. However, the Project would not interfere or impede efforts to reduce such pollutants.
High GWP Potential Emissions	Low GWP refrigerants introduced as building electrification	SB 605 (2014) directed CARB to develop a comprehensive Short-Lived Climate Pollutant (SLCP) strategy.	**No Conflict.** This program applies to State regulators looking to reduce high GWP refrigerants and is not directly

Table 6
Consistency Analysis—2022 Scoping Plan Update

Sector	Actions and Strategies	Statutes, Executive Orders, Other Direction	Project Consistency Analysis
	increases, mitigating HFC emissions		related to development of the Project. However, the Project would not interfere or impede efforts to reduce such pollutants.
Natural and Working Lands	Conserve 30% of the state's NWL and coastal waters by 2030. Implement near- and long-term actions to accelerate natural removal of carbon and build climate resilience in our forests, wetlands, urban greenspaces, agricultural soils, and land conservation activities in ways that serve all communities—and in particular low-income, disadvantaged, and vulnerable communities.	EO N-82-20 and SB 27: CARB to include an NWL target in the Scoping Plan. AB 1757: Establish targets for carbon sequestration and nature-based climate solutions. SB 1386: NWL are an important strategy in meeting GHG reduction goals.	**No Conflict.** This program applies to State regulators governing Natural and Working Lands and is not directly related to development of the Project. However, the Project would not interfere or impede implementation of the Integrated Natural and Working Lands Implementation Plan, EO N-82-20, SB 27, or SB 1386.
Forests and Shrublands	At least 2.3 million acres treated statewide annually in forests, shrublands/chaparral, and grasslands, comprised of regionally specific management strategies that include prescribed fire, thinning, harvesting, and other management actions. No land conversion of forests, shrublands/chaparral, or grasslands.	Restore health and resilience to overstocked forests and prevent carbon losses from severe wildfire, disease, and pests. Improve air quality and reduce health costs related to wildfire emissions. Improve water quantity and quality and improve rural economies. Provide forest biomass for resource utilization. EO B-52-18: CARB to increase the opportunity for using prescribed fire. AB 1504 (Skinner, Chapter 534, Statutes of 2010): CARB to recognize the role forests play in carbon sequestration and climate mitigation.	**No Conflict.** This program applies to State regulators governing forest and shrubland management and is not directly related to development of the Project. However, the Project would not interfere or impede implementation of EO B-52-18, AB 1504, or the Forest Carbon Plan.
Grasslands	At least 2.3 million acres treated includes increased management of grasslands interspersed in forests to reduce fuels		**No Conflict.** This program applies to State regulators of grasslands and is not directly related to development of the Project. However, the Project

Table 6
Consistency Analysis—2022 Scoping Plan Update

Sector	Actions and Strategies	Statutes, Executive Orders, Other Direction	Project Consistency Analysis
	surrounding communities using management strategies appropriate for grasslands. No land conversion of forests, shrublands/chaparral, or grasslands.		would not interfere or impede efforts to reduce fuels in grasslands surrounding communities.
Croplands	Implement climate smart practices for annual and perennial crops on ~80,000 acres annually. Land easements/ conservation on annual crops at ~5,500 acres annually. Increase organic agriculture to 20% of all cultivated acres by 2045 (~65,000 acres annually).	SB 859: Recognizes the ability of healthy soils practices to reduce GHG emissions from agricultural lands.	**No Conflict.** This program applies to State regulators overseeing croplands and is not directly related to development of the Project. However, the Project would not interfere or impede SB 859 and efforts to increase organic agriculture and conserve croplands.
Developed Lands	Increase urban forestry investment by 200% above current levels and utilize tree watering that is 30% less sensitive to drought. Establish defensible space that accounts for property boundaries.	AB 2251 (Calderon, Chapter 186, Statutes of 2022): Increase urban tree canopy 10% by 2035.	**No Conflict.** This program applies to State regulators addressing urban forestry and is not directly related to development of the Project. However, the Project would not interfere or impede implementation of AB 2251 and efforts to increase the urban canopy.
Wetlands	Restore 60,000 acres of Delta wetlands		**No Conflict.** This program applies to State regulators restoring Delta wetlands and is not directly related to development of the Project. However, the Project would not interfere or impede efforts to restore wetland ecologies.
Sparsely Vegetated Lands	Land conversion at 50% of the Reference Scenario land conversion rate.		**No Conflict.** This program applies to State regulators slowing the conversion of sparsely vegetated lanes and is not directly related to

Table 6
Consistency Analysis—2022 Scoping Plan Update

Sector	Actions and Strategies	Statutes, Executive Orders, Other Direction	Project Consistency Analysis
			development of the Project. However, the Project would not interfere or impede efforts to slow urban conversion of such lands.
Cap-and-Trade Program	Implement the post-2020 Cap-and-Trade Program with declining annual caps.	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.	**Not Applicable.** This applies to the market-based program to reduce GHG emissions over time and is not applicable to a development project.

Source: DKA Planning, 2024 based on California Air Resources Board, 2022 Scoping Plan for Achieving Carbon Neutrality, Scoping Plan Scenario.

Based on the consistency discussion in Table 6, the Project would be consistent with the State's Climate Change Scoping Plan and thus, Project impacts related to consistency with the Scoping Plan would be less than significant impact.

In addition to the Project's consistency with applicable GHG emissions reduction regulations and strategies, the Project would not conflict with future anticipated statewide GHG emissions reductions goals. Specifically, CARB has outlined strategies for achieving the 2030 reduction target of 40 percent below 1990 levels, as mandated by SB 32 as well as carbon neutrality by 2045. These strategies include renewable resources for the state's electricity, increasing the fuel economy of vehicles and the penetration of zero-emission or hybrid vehicles into the vehicle fleet, reducing the rate of growth in VMT, supporting high-speed rail and other alternative transportation options, and use of high-efficiency appliances, water heaters, and HVAC systems.

The Project would also benefit from statewide and utility-provider efforts towards increasing the portion of electricity provided from renewable resources. SCE has committed to increasing renewable sources that exceed the Renewables Portfolio Standard requirements. The Project would include energy efficient mechanical systems, energy efficient glazing and window frames, Energy-Star appliances to be installed on-site, and the use of high-efficiency lighting. The Project would also benefit from statewide efforts to improve fuel economy of vehicles. The Project would also help reduce VMT growth given its design and complementary mix of uses at an infill site that is accessible to existing public transit.

Regional: 2024-2050 Regional Transportation Plan/Sustainable Communities Strategy

Table 7 provides a comparison of the Project against the GHG-related performance measures of the 2024-2050 RTP/SCS.

Table 7
Consistency with the 2024 RTP/SCS

Performance Measure	Consistency Analysis[a]
Decrease average distance traveled for work trips from 16.2 to 15.9 miles by 2050.	**Consistent.** The Project is an infill development that would locate more diverse housing solutions on the Avalon Boulevard corridor and within an HQTC, consistent with the 2024-2050 RTP/SCS policies. While 60 percent of work trips were less than 30 minutes, the Project would increase the density of development on the Project Site, the Harbor Gateway, and the South Bay that would potentially decrease distance for commutes within these job centers.[55]
Decrease average distance traveled for non-work trips to 6.1 miles by 2050.	**Consistent.** The Project is an infill development that would focus on growth on the Avalon Boulevard corridor and within an HQTC. It would increase the density of development on the Project Site that would potentially reduce the need for longer

[55] Southern California Association of Governments, Profile of the City of Carson; May 2019.

Performance Measure	Consistency Analysis[a]
	travel to non-work destinations, which averaged 27 minutes per trip in 2018.[56]
Increase share of all trips ten miles or less from 46.9 to 47.6 percent by 2050.	**Consistent.** The Project is an infill development that would focus on growth on the Avalon Boulevard corridor and within an HQTC. It would increase the density of development on the Project Site that would potentially reduce the need for longer travel to destinations outside of the Harbor Gateway and South Bay in general.
Increase share of all trips 25 miles or less from 80.1 to 80.7 percent by 2050.	**Consistent.** The Project is an infill development that would focus on growth on the Avalon Boulevard corridor and within an HQTC. It would increase the density of development on the Project Site that would potentially reduce the need for longer travel to destinations outside of the Harbor Gateway and South Bay in general.
Increase share of work trips by SOV from 65.9 to 61.9 percent by 2050.	**Consistent.** The Project is an infill development in the dense Avalon Boulevard corridor that will reduce the rate of growth in SOV use and congestion by virtue of its transit accessibility along this corridor, with bus stops in front of the Project Site on Avalon Boulevard and other transit service nearby on Carson Street.
Increase share of all trips by SOV from 37.0 to 34.7 percent by 2050.	**Consistent.** The Project is an infill development in the dense Avalon Boulevard corridor that will reduce the rate of growth in SOV use and congestion by virtue of its transit accessibility along this corridor.
Decrease share of work trips by SOV from 23.9 to 21.7 percent by 2050.	**Consistent.** The Project is an infill development in the dense Avalon Boulevard corridor that will reduce the rate of growth in SOV use by centralizing more diverse housing options on the Project Site.
Decrease share of all trips by SOV from 48.7 to 46.3 percent by 2050.	**Consistent.** The Project is an infill development in the dense Avalon Boulevard corridor that will reduce the rate of growth in SOV use by virtue of its transit accessibility along this corridor, with bus stops in front of the Project Site on Avalon Boulevard and other transit service nearby on Carson Street.
Increase share of work trips by transit from 4.6 to 7.9 percent by 2050.	**Consistent.** The Project would increase the density of development and housing on the Project Site and increase transit ridership by virtue of its bus stops in front of the Project Site on Avalon Boulevard and other transit service nearby on Carson Street. These stops are located within walking distance of the Project Site and could increase transit boardings over existing conditions.

[56] Southern California Association of Governments, Profile of the City of Carson; May 2019.

Performance Measure	Consistency Analysis[a]
Increase share of all trips by transit from 3.9 to 5.3 percent by 2050.	**Consistent.** The Project would increase the density of development and housing on the Project Site and increase transit ridership by virtue of its bus stops in front of the Project Site on Avalon Boulevard and other transit service nearby on Carson Street. These stops are located within walking distance of the Project Site and could increase transit boardings over existing conditions.
Increase share of work trips by walking from 3.6 to 4.3 percent by 2050.	**Consistent.** The Project would increase the density of development and housing on the Project Site, which is served by developed sidewalks. As such, the Project could increase the share of walking commute trips over existing conditions.
Increase share of all trips by walking from 8.8 to 10.2 percent by 2050.	**Consistent.** The Project would increase the density of development on the Project Site, which is served by sidewalks. As such, the Project could increase the share of walking trips over existing conditions.
Increase share of work trips by bicycle from 1.9 to 4.1 percent by 2050.	**Consistent.** The Project would increase the density of development and jobs on the Project Site, which is served by flat streets. As such, the Project could increase the share of bicycling commute trips over existing conditions.
Increase share of all trips by bicycle from 1.6 to 3.5 percent.	**Consistent.** The Project would increase the density of development on the Project Site, which is served by flat streets. As such, the Project could increase the share of bicycling trips over existing conditions, where auto dealerships were not conducive to bicycle travel.
Reduce person hours of delay on highways from 1,266,283 to 1,024,863 by 2050.	**Consistent.** The Project's focus on diverse housing options is would increase the potential for more local, non-highway-based trips. As such, the Project would not promote highway-based driving that would contribute to congestion and delay.
Reduce person hours of delay on HOV lanes from 84,351 to 12,345 by 2050.	**Consistent.** The Project's focus on diverse housing options is would increase the potential for more local, non-highway-based trips. As such, the Project would not promote highway-based driving that would contribute to congestion and delay.
Reduce person hours of delay on arterials from 1,245,043 to 927,265 by 2050.	**Consistent.** The Project is an infill development that would create more housing options, consistent with the 2024-2050 RTP/SCS policies. Residents would have access to four local and rapid bus routes on Avalon Boulevard and Carson Street that could increase transit use and reduce the growth of delay on arterials.
Reduce person hours of delay on all facilities from 2,868,470 to 2,184,952 by 2050.	**Consistent.** The Project is an infill development that would create more housing options, consistent with the 2024-2050 RTP/SCS policies. Residents would have access to four local and rapid bus routes on Avalon Boulevard and Carson Street that could increase transit use and reduce the growth of delay on all facilities.

Performance Measure	Consistency Analysis[a]
Reduce daily minutes of delay per capita from 8.2 to 6.3 by 2050.	**Consistent.** The Project is an infill development that would create more housing options, consistent with the 2024-2050 RTP/SCS policies. Residents would have access to four local and rapid bus routes on Avalon Boulevard and Carson Street that could increase transit use and reduce the delay per capita.
Reduce truck delay on highways from 140,249 to 119,137 hours by 2050.	**Consistent.** The Project's focus on local housing would generally not involve use of long-distance heavy-duty trucks. As such, the Project would not promote highway-based use of heavy-dusty trucks that would contribute to congestion and delay.
Reduce truck delay on arterials from 28,457 to 22,621 hours by 2050.	**Consistent.** The Project's focus on local housing would generally not involve use of heavy-duty trucks. As such, the Project would not promote use of heavy-dusty trucks that would contribute to congestion and delay on arterials.
Reduce truck delay on all facilities from 173,039 to 144,812 hours by 2050.	**Consistent.** The Project's focus on local housing would generally not involve use of heavy-duty trucks. As such, the Project would not promote use of heavy-dusty trucks that would contribute to congestion and delay on all facilities.
Reduce average travel time to work from 27.8 to 27.1 minutes by 2050.	**Consistent. Consistent.** The Project is an infill development that would locate more diverse housing solutions on the Avalon Boulevard corridor and within an HQTC, consistent with the 2024-2050 RTP/SCS policies. While 60 percent of work trips were less than 30 minutes, the Project would increase the density of development on the Project Site, the Harbor Gateway, and the South Bay that would potentially decrease distance for commutes within these job centers.
Increase annual number of transit boardings per capita from 47.2 to 77.5 by 2050.	**Consistent.** The Project would increase the density of development and housing on the Project Site and increase transit ridership by virtue of its bus stops in front of the Project Site on Avalon Boulevard and other transit service nearby on Carson Street. These stops are located within walking distance of the Project Site and could increase transit boardings over existing conditions.
Increase share of jobs accessible within 30 minutes by auto from 12.2 to 13.4 percent by 2050.	**Consistent.** The Project is an infill development that would locate more diverse housing solutions on the Avalon Boulevard corridor and within an HQTC, consistent with the 2024-2050 RTP/SCS policies. While 60 percent of work trips were less than 30 minutes, the Project would increase the density of development on the Project Site, the Harbor Gateway, and the South Bay that would potentially decrease distance for commutes within these job centers.

Performance Measure	Consistency Analysis[a]
Increase share of jobs accessible within 45 minutes by transit from 1.8 to 2.6 percent by 2050.	**Consistent.** The Project is an infill development that would create more service-related jobs, consistent with the 2024-2050 RTP/SCS policies and would focus on job growth on the Avalon Boulevard corridor and within an HQTC. It would increase the density of development on the Project Site that would potentially increase on-site employment and the share of work trips amenable to public transit.
Increase share of shopping destinations accessible within 15 minutes by auto from 4.2 to 4.6 percent by 2050.	**No Conflict.** The Project does not include shopping destinations. Nevertheless, it would not inhibit the region's efforts to add to the supply of shopping options in metropolitan Los Angeles County.
Increase share of shopping destinations accessible within 30 minutes by transit from 0.4 to 0.6 percent by 2050.	**No Conflict.** The Project does not include shopping destinations. Nevertheless, it would not inhibit the region's efforts to add to the supply of shopping options in metropolitan Los Angeles County near public transit.
Increase share of educational destinations accessible within 30 minutes by auto from 12.1 to 13.4 percent by 2050.	**No Conflict.** The Project does not include educational destinations. Nevertheless, it would not inhibit the region's efforts to add to the supply of educational options in metropolitan Los Angeles County.
Increase share of educational destinations accessible within 30 minutes by transit from 0.2 to 0.4 percent by 2050.	**No Conflict.** The Project does not include educational destinations. Nevertheless, it would not inhibit the region's efforts to add to the supply of educational options in metropolitan Los Angeles County near public transit.
Increase share of healthcare destinations accessible within 30 minutes by auto from 16.7 to 18.4 percent by 2050.	**No Conflict.** The Project does not include healthcare destinations. Nevertheless, it would not inhibit the region's efforts to add to the supply of healthcare options in metropolitan Los Angeles County.
Increase share of healthcare destinations accessible within 30 minutes by transit from 0.3 to 0.5 percent by 2050.	**No Conflict.** The Project does not include healthcare destinations. Nevertheless, it would not inhibit the region's efforts to add to the supply of healthcare options in metropolitan Los Angeles County near public transit.
Increase share of work trips less than three miles from 16.5 to 16.7 percent by 2050.	**No Conflict.** The Project is an infill development that would locate more diverse housing solutions on the Avalon Boulevard corridor and within an HQTC, consistent with the 2024-2050 RTP/SCS policies. While 60 percent of work trips were less than 30 minutes, the Project would increase the density of development on the Project Site, the Harbor Gateway, and the South Bay that would potentially decrease distance for commutes within these job centers.[57]
Increase share of non-work trips less than three miles to 41.8 percent	**No Conflict.** The Project is an infill development that would locate more diverse housing solutions on the Avalon Boulevard corridor and within an HQTC, consistent with the

[57] Southern California Association of Governments, Profile of the City of Carson; May 2019.

Performance Measure	Consistency Analysis[a]
	2024-2050 RTP/SCS policies. While 60 percent of work trips were less than 30 minutes, the Project would increase the density of development on the Project Site, the Harbor Gateway, and the South Bay that would potentially decrease distance for commutes within these job centers.[58]
Increase share of regional housing units within designated Priority Development Areas (PDAs) from 57.0 to 61.1 percent by 2050.	**No Conflict.** The Project is an infill development that would locate more diverse housing solutions on the Avalon Boulevard corridor and within an HQTC including 29 affordable units, consistent with the 2024-2050 RTP/SCS policies. As such, it would advance the region's efforts to add to housing units in PDAs.
Increase share of population able to reach a park within 30 minutes by auto to 99.6 percent by 2050.	**No Conflict.** The Project is an infill development that would locate more diverse housing solutions on the Avalon Boulevard corridor and within an HQTC including 29 affordable units, consistent with the 2024-2050 RTP/SCS policies. As such, it would advance the region's efforts to add to housing units in PDAs.
Increase share of population able to reach a park within 30 minutes by transit from 57.6 to 62.1 percent by 2050.	**No Conflict.** The Project is an infill development that would locate more diverse housing solutions on the Avalon Boulevard corridor and within an HQTC including 29 affordable units, consistent with the 2024-2050 RTP/SCS policies. As such, it would advance the region's efforts to add access to parklands.
Decrease daily VMT per capita from 20.7 to 19.4 by 2050.	**Consistent.** The Project is an infill development in the dense Avalon Boulevard corridor that will reduce the rate of growth in auto traffic and congestion by virtue of its transit accessibility. As such, it is consistent with AB 32, SB 32, SB 375, and other initiatives designed to reduce per capita GHG emissions from 2005 levels.
Decrease total square miles of greenfield and rural lands converted to urban use from 79.3 to 41.8 by 2050.	**Consistent.** The Project is an infill development in the dense Avalon Boulevard corridor that will reduce the rate of urban sprawl and the conversion of greenfield and rural lands. As such, it is consistent with AB 32, SB 32, SB 375, and other initiatives designed to reduce GHG emissions.
Decrease energy consumption per household from 45.8 to 44.6 million BTUs by 2050.	**No Conflict.** The Project would comply with Title 24 and the State's environmental regulations and the region's efforts to add to improve energy efficiency in residences.
Decreases urban water consumption per household from 75,100 to 74,600 gallons by 2050.	**No Conflict.** The Project would comply with Title 24 and the State's environmental regulations and the region's efforts to add to reduce water consumption per capita in residences.
Source: DKA Planning, 2024.	

[58] Southern California Association of Governments, Profile of the City of Carson; May 2019.

Locally, the City has several conservation-based plans, programs, and requirements that also indirectly produce GHG reductions. While these are not considered climate action plans, the Proposed Project's consistency with these local initiatives is summarized.

Local: City of Carson General Plan Open Space and Environmental Conservation Element

The Project would be consistent with the City's General Plan Open Space and Environmental Conservation Element. Table 8 summarizes the Project's consistency with the General Plan.

Table 8
Consistency with City of Carson Open Space and Environmental Conservation Element

Policy	Consistency Analysis
Policy 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.	**No Conflict.** While the Policy calls on the City to advance citywide policies and isn't directly applicable to development projects, the Project would comply with Building Code and Title 24 requirements that reduce energy and water consumption and GHG emissions.
Policy OSEC-G-24: Incorporate green infrastructure design in new projects to promote sustainability in the built environment.	**Consistent.** The Project would comply with Building Code and Title 24 requirements that would reduce energy and water consumption as well as GHG emissions.
Policy 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.	**No Conflict.** While the Policy calls on the City to advance citywide policies and isn't directly applicable to development projects, the Project would comply with Building Code and Title 24 requirements that would reduce energy and water consumption and GHG emissions.
Policy OSEC-G-26: Plan for extreme weather events by incorporating the potential effects and threats of climate change into emergency management planning.	**No Conflict.** The Policy calls on the City to advance citywide policies that address emergency planning and isn't directly applicable to development projects,
Policy 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.	**No Conflict.** The Policy calls on the City to advance citywide policies that address climate adaptation and isn't directly applicable to development projects,
Policy OSEC-G-28: Promote sustainable practices as well as environmental remediation for heavy industrial areas and seek to reduce trucking emissions.	**No Conflict.** This policy focuses on growth in industrial areas and is not applicable to the Proposed Project.
Source: DKA Planning, 2024.	

Local: City of Carson Climate Action Plan

The CAP's focus on land use and transportation, energy efficiency, solid waste, urban greening, and energy generation and storage are aimed at City leadership and the development of citywide regulations and programs that advance carbon reduction. While the CAP's policies are generally not applicable to development projects, the Proposed Project would comply with the Building Code and Title 24's conservation requirements that would reduce GHG emissions from construction, energy, water, waste, area sources, transportation, and other sources of carbon-based emissions. As such, the Project would be consistent with the City's implementation of the CAP over time.

Conclusion

In summary, the plan consistency analysis provided above demonstrates that the Project complies with the applicable plans, policies, regulations and GHG emissions reduction actions/strategies outlined in the *Climate Change Scoping Plan and Update*, the 2024-2050 RTP/SCS, the City's General Plan Open Space and Environmental Conservation Element, and the City's CAP. Consistency with the above plans, policies, regulations, and GHG emissions reduction actions/strategies would reduce the Project's incremental contribution of GHG emissions. Thus, the Project would not conflict with any applicable plan, policy, or regulation of an agency adopted for the purpose of reducing emissions of GHG emissions. Furthermore, because the Project is consistent and does not conflict with these plans, policies, and regulations, the Project's incremental increase in GHG emissions as described above would not result in a significant impact on the environment. Therefore, Project-specific impacts regarding climate change would be less than significant.

Project Emissions

In support of the consistency analysis above that describes the Project's compliance with, or exceedance of performance-based standards included in the regulations and policies outlined in the applicable portions of the *Climate Change Scoping Plan*, the 2024-2050 RTP/SCS, the City's General Plan Open Space and Environmental Conservation Element, and the CAP, quantitative calculations are provided below.

The Project would generate direct and indirect GHG emissions because of different types of emissions sources, including the following:

- Construction: emissions associated with demolition of the existing motel uses and parking areas, shoring, excavation, grading, and construction-related equipment and vehicular activity;

- Area source: emissions associated with landscape equipment;

- Energy source (building operations): emissions associated with electricity and natural gas use for space heating and cooling, water heating, energy consumption, and lighting;

- Stationary source: emissions associated with stationary equipment (e.g., emergency generators);

- Mobile source: emissions associated with vehicles accessing the Project Site;

- Solid Waste: emissions associated with the decomposition of the waste, which generates methane based on the total amount of degradable organic carbon; and

- Water/Wastewater: emissions associated with energy used to pump, convey, deliver, and treat water.

- Refrigerants: These are substances used in equipment for air conditioning and refrigeration. Most refrigerants are HFCs or blends of them, which can have high GWP values.

- Vegetation: emissions from lane use change and changes in sequestration from tree removal and planting.

The Project would generate an incremental contribution to and a cumulative increase in GHG emissions. A specific discussion regarding potential GHG emissions associated with the construction and operational phases of the Project is provided below.

Construction

Project construction is anticipated to be completed in 2026 with occupancy the same year. A summary of construction details (e.g., schedule, equipment mix, and vehicular trips) and CalEEMod modeling output files are provided in the Technical Appendix. The GHG emissions associated with construction of the Project were calculated for each year of construction activity.

Construction of the Project is estimated to generate a total of 1,693 $MTCO_2e$ (Table 9). As recommended by the SCAQMD, the total GHG construction emissions were amortized over the 30-year lifetime of the Project (i.e., total construction GHG emissions were divided by 30 to determine an annual construction emissions estimate that can be added to the Project's operational emissions) to determine the Project's annual GHG emissions inventory.[59] This results in annual Project construction emissions of 56 $MTCO_2e$. A complete listing of the construction equipment by on-site and off-site activities, duration, and emissions estimation model input assumptions used in this analysis is included within the emissions calculation worksheets that are provided in the Technical Appendix.

59 SCAQMD Governing Board Agenda Item 31, December 5, 2008.

Table 9
Combined Construction-Related Emissions ($MTCO_2e$)

Year	$MTCO_2e$[a]
2025	1,112
2026	581
Total	**1,693**
Amortized Over 30 Years	**56**

a CO_2e was calculated using CalEEMod version 2022.1.1.26. Detailed results are provided in the Technical Appendix.
Source: DKA Planning, 2024.

Operation

Area Source Emissions

Area source emissions were calculated using the CalEEMod emissions inventory model, which includes landscape maintenance equipment, use of consumer products, and other everyday sources. While CARB's 2022 regulations governing small-engine equipment require that model year 2024 and after landscaping equipment be zero-emission, the current version of CalEEMod has not factored in this development; as such, landscaping emissions are overstated. As shown in Table 10, the Project would result in ten $MTCO_2e$ per year from area sources.

Table 10
Annual GHG Emissions Summary (Buildout)[a]
(metric tons of carbon dioxide equivalent [MTCO2e])

Year	$MTCO_2$[a]
Area[b]	10
Energy[c] (electricity and natural gas)	741
Mobile	5,464
Solid Waste[d]	84
Water/Wastewater[e]	30
Refrigerants	1
Vegetation	-10
Construction	56
Total Emissions	**6,375**

a CO_2e was calculated using CalEEMod and the results are provided in the Technical Appendix.
b Area source emissions are from landscape equipment and other operational equipment only; hearths omitted.
c Energy source emissions are based on CalEEMod default electricity and natural gas usage rates.
d Solid waste emissions are calculated based on CalEEMod default solid waste generation rates.
e Water/Wastewater emissions are calculated based on CalEEMod default water consumption rates.
Source: DKA Planning, 2024.

Electricity and Natural Gas Generation Emissions

GHG emissions are emitted because of activities in buildings when electricity and natural gas are used as energy sources. Combustion of any type of fuel emits CO_2 and other GHG emissions directly into the atmosphere. When electricity is used in a building, the electricity generation typically takes place off-site at the power plant; electricity use in a building generally causes emissions in an indirect manner.

Electricity and natural gas emissions were calculated for the Project using the CalEEMod emissions inventory model, which multiplies an estimate of the energy usage by applicable emissions factors chosen by the utility company. GHG emissions from electricity use are directly dependent on the electricity utility provider. In this case, GHG emissions intensity factors for SCE were selected in CalEEMod. The carbon intensity (pounds per megawatt an hour (lbs/MWh)) for electricity generation was calculated for the Project buildout year based on SCE projections. A straight-line interpolation was performed to estimate the SCE carbon intensity factor for the Project buildout year. SCE's carbon intensity projections also consider SB 350 RPS requirements for renewable energy.

This approach is conservative, given the 2018 chaptering of SB 100 (De Leon), which requires electricity providers to provide renewable energy for at least 60 percent of their delivered power by 2030 and 100 percent use of renewable energy and zero-carbon resources by 2045. SB 100 also increases existing renewable energy targets, called Renewables Portfolio Standard (RPS), to 44 percent by 2024 and 52 percent by 2027.

The 2022 Title 24 standards contain more substantial energy efficiency requirements for new construction, emphasizing the importance of building design and construction flexibility to establish performance standards that substantially reduce energy consumption for water hating, lighting, and insulation for attics and walls.

Energy use in buildings is divided into energy consumed by the built environment and energy consumed by uses that are independent of the construction of the building, such as in plug-in appliances. CalEEMod calculates energy use from systems covered by Title 24 (e.g., HVAC system, water heating system, and lighting system); energy use from lighting; and energy use from office equipment, appliances, plug-ins, and other sources not covered by Title 24 or lighting.

CalEEMod electricity and natural gas usage rates are based on the CEC-sponsored California Commercial End-Use Survey (CEUS) and the California Residential Appliance Saturation Survey (RASS) studies.[60] The data are specific for climate zones; therefore, Zone 11 was selected for the Project Site based on the zip code tool.

60 California Energy Commission, Commercial End-Use Survey, March 2006, and California Residential Appliance Saturation Survey, October 2010.

As shown in Table 10, Project GHG emissions from electricity and natural gas usage would result in a total of 741 $MTCO_2e$ per year.

Mobile Source Emissions

Mobile-source emissions were calculated using the SCAQMD-recommended CalEEMod emissions inventory model. CalEEMod calculates the emissions associated with on-road mobile sources associated with residents, employees, visitors, and delivery vehicles visiting the Project Site based on the number of daily trips generated and VMT.

Mobile source operational GHG emissions were calculated using CalEEMod and are based on the Project trip-generation estimates. To calculate daily trips, the number of hotel rooms and amount of building area for the restaurant uses were multiplied by the applicable trip-generation rates based on the ITE's *Trip Generation, 11th Edition*.

The Project represents an infill development within an urbanized area that would concentrate self-storage uses within an HQTA.[61] The Project Site is in the dense Ventura Boulevard corridor with proximity to Metro local bus services. The Project would provide bicycle storage areas for Project employees and visitors. The Project would also incorporate characteristics that would reduce trips and VMT as compared to standard ITE trip generation rates. The Project characteristics listed below are consistent with the CAPCOA guidance document, *Quantifying Greenhouse Gas Mitigation Measures*, which provides emission reduction values for transportation related design techniques.[62] These techniques would reduce vehicle trips and VMT associated with the Project relative to the standard ITE trip generation rates, which would result in a comparable reduction in VMT and associated GHG emissions. Techniques applicable to the Project include the following (a brief description of the Project's relevance to the measure is also provided):

- **CAPCOA Measure LUT-1 – Increase Density:** Increased density, measured in terms of persons, jobs, or dwelling units per unit area, reduces emissions associated with transportation as it reduces the distance people travel for work or services and provides a foundation for the implementation of other strategies, such as enhanced transit services.

- **CAPCOA Measure LUT-3 – Increase Diversity of Urban and Suburban Developments (Mixed-Use):** The Project would introduce new residences on the Project Site. The increase of diverse housing options (including 29 affordable units) would reduce vehicle

61 The Project Site is also located in Transit Priority Area as defined by Public Resources Code Section 20199. Public Resources Code Section 21099 defines a "transit priority area" as an area within 0.5 miles of a major transit stop that is "existing or planned, if the planned stop is scheduled to be completed within the planning horizon included in a Transportation Improvement Program adopted pursuant to Section 450.216 or 450.322 of Title 23 of the Code of Federal Regulations." Public Resources Code Section 21064.3 defines "major transit stop" as "a site containing an existing rail transit station, a ferry terminal served by either a bus or rail transit service, or the intersection of two or more major bus routes with a frequency of service interval of 15 minutes or less during the morning and afternoon peak commute periods." Also refer to the City's ZIMAS System regarding the location of the Project Site within a Transit Priority Area.

62 CAPCOA, Quantifying Greenhouse Gas Mitigation Measures, 2010.

trips and VMT by locating more housing in the jobs-rich South Bay and Harbor Gateway would result in corresponding reductions in transportation-related emissions.

- **CAPCOA Measure LUT-4 – Increase Destination Accessibility:** The Project Site is in the dense Avalon Boulevard corridor, a regional job center, also easily accessible by public transportation. Access to multiple destinations would reduce vehicle trips and VMT compared to the statewide average and encourage walking and non-automotive forms of transportation and would result in corresponding reductions in transportation-related emissions because of the Project.

- **CAPCOA Measure LUT-5 – Increase Transit Accessibility:** The Project would be located near several bus routes on Avalon Boulevard in front of the Project Site and on Carson Street to the south. The Project would also provide bicycle parking spaces to encourage utilization of alternative modes of transportation.

- **CAPCOA Measure LUT-9 – Improve Design of Development:** The Project would enhance the pedestrian and bicycle environment through an attractive open space component and improved sidewalk and streetscape, which would enhance walkability in the Project vicinity. The Project would also locate a development with a high level of street access, which improves street accessibility and connectivity.

- **CAPCOA Measure SDT-2 – Traffic Calming Measures:** Providing traffic calming measures encourages people to walk or bike instead of using a vehicle. This mode shift results in a decrease in VMT. Streets within a half mile of the Project Site are equipped with sidewalks, and several of the intersections include marked crosswalks and/or count-down signal timers that calm traffic.

CalEEMod calculates VMT based on the type of land use, trip purpose, and trip type percentages for each land use subtype in the project (primary, diverted, pass-by). As shown in Table 9, the Project GHG emissions from mobile sources would result in a total of 5,464 $MTCO_2e$ per year. This estimate reflects reductions attributable to the Project's characteristics (e.g., infill project near transit that supports multi-modal transportation options), as described above.

Solid Waste Generation Emissions

Emissions related to solid waste were calculated using the CalEEMod emissions inventory model, which multiplies an estimate of the waste generated by applicable emissions factors provided in Section 2.4 of the USEPA's AP-42, Compilation of Air Pollutant Emission Factors. CalEEMod solid waste generation rates for each applicable land use were selected for this analysis. As

shown in Table 10, the Project scenario is expected to result in a total of 84 $MTCO_2e$ per year from solid waste that accounts for a 50-percent recycling/diversion rate.[63]

Water Usage and Wastewater Generation Emissions

GHG emissions are related to the energy used to convey, treat, and distribute water, and treat wastewater. Thus, these emissions are generally indirect emissions from the production of electricity to power these systems. Three processes are necessary to supply potable water; these include (1) supply and conveyance of the water from the source; (2) treatment of the water to potable standards; and (3) distribution of the water to individual users. After use, energy is used as the wastewater is treated and reused as reclaimed water.

Emissions related to water usage and wastewater generation were calculated for the Project using the CalEEMod emissions inventory model, which multiplies an estimate of the water usage by the applicable energy intensity factor to determine the embodied energy necessary to supply potable water.[64] GHG emissions are then calculated based on the amount of electricity consumed multiplied by the GHG emissions intensity factors for the utility provider. In this case, embodied energy for Southern California supplied water and GHG emissions intensity factors for SCE and SCG were selected in CalEEMod. Water usage rates were calculated consistent with the requirements under City Ordinances.

SCE's programs includes programs designed to reduce indoor water consumption and wastewater generation by 20 percent. These include the 2022 requirements for installation of the latest ultra-high efficiency plumbing fixtures, the standards that promote increasing water-resistant turf and incorporating rainfall capture techniques in project designs, aggressive outdoor water consumption programs through its Landscape ordinance, and water recycling programs designed to increase recycled water to 59,000 acre-feet by 2035.

As shown in Table 10, Project GHG emissions from water/wastewater usage would result in a total of 30 $MTCO_2e$ per year, which reflects a 20-percent reduction in water/wastewater emissions consistent with building code requirements as compared to the Project without sustainability features related to water conservation.

Refrigerants

Emissions related to cooling structures and refrigeration needs were calculated using the CalEEMod emissions inventory model. As shown in Table 10, the Project scenario is expected to result in a total of one $MTCO_2e$ per year from use of refrigerants that used HFCs and have high GWP values.

63 AB 341 (2012) increased the Statewide waste diversion goal from 50 to 75 percent from baseline rates established by CalRecycle by 2020 and beyond. Further, SB 1383 (2016) requires jurisdictions to reduce 75 percent of organic waste disposal in landfills by 2030.

64 The intensity factor reflects the average pounds of CO_2e per megawatt generated by a utility company.

Vegetation

The planting of trees throughout the Project Site would serve as a carbon sink that absorbs carbon dioxide. As shown in Table 10, the Project scenario is expected to result in a reduction of ten $MTCO_2e$ per year.

Combined Construction and Operational Emissions

As shown in Table 10, when taking into consideration implementation of project design features, including the requirements set forth in the City's Green Building Code and the full implementation of current state mandates, the GHG emissions for the Project would equal 6,375 $MTCO_2e$ annually (as amortized over 30 years).

Estimated Reduction of Project Related GHG Emissions Resulting from Consistency with Plans

As noted earlier, one approach to demonstrating a project's consistency with GHG plans is to show how a project will reduce its incremental contribution through a Project Without Reduction Features comparison. The analysis in this section includes potential emissions under a Project Without Reduction Features scenario and from the Project at build-out based on actions and mandates in force in 2026.

As shown in Table 11, the emissions for the Project and its associated CARB 2026 Project Without Reduction Features scenario are estimated to be 6,375 and 9,232 $MTCO_2e$ per year, respectively, which shows the Project would reduce emissions by 30.9 percent from CARB's 2026 Project Without Reduction Features scenario.

The analysis in this section uses the Scoping Plan's statewide goals as one approach to evaluate the Project's incremental contribution to climate change. The methodology is to compare the Project's emissions as proposed to the Project's emissions as if the Project were built using a Project Without Reduction Features approach in terms of design, methodology, and technology. This means the Project's emissions were calculated as if the Project was constructed with project design features to reduce GHG emissions that are not required by state or local code and with several regulatory measures adopted in furtherance of AB 32.

While the AB 32 Scoping Plan's cumulative statewide objectives were not intended to serve as the basis for project-level assessments, this analysis finds that its Project Without Reduction Features comparison based on the Scoping Plan is appropriate, because the Project would contribute to statewide GHG emissions reduction goals. Specifically, the Project's location in an existing urban setting provide opportunities to reduce transportation-related emissions. First, it would capture vehicle travel on-site that would have normally been destined for off-site locations. This produces substantial reductions in the amount of vehicle trips and VMT that no longer are made. Second, it would eliminate many vehicle trips, because travel to and from the Project Site could be captured by public transit and active transportation instead. Finally, it would attract existing trips on the street network that would divert to the proposed development.

Table 11
Estimated Reduction of Project-Related GHG Emissions Resulting from Consistency with Plans

Scenario and Source	Project Without Reduction Features Scenario*	As Proposed Scenario	Reduction from Project Without Reduction Features Scenario	Change from Project Without Reduction Features Scenario
Area Sources	10	10	-	0%
Energy Sources	1,278	741	-537	-42%
Mobile Sources	7,783	5,464	-2,319	-30%
Waste Sources	84	84	-	0%
Water Sources	30	30	-	0%
Refrigerants	1	1	-	0%
Vegetation	-10	-10	-	0%
Construction	56	56	-	0%
Total Emissions	9,232	6,375	-2,856	-30.9%

Daily construction emissions amortized over 30-year period pursuant to SCAQMD guidance. Annual construction emissions derived by taking total emissions over duration of activities and dividing by construction period.
** Project Without Reduction Features scenario does not assume 30% reduction in in mobile source emissions from Pavley emission standards (19.8%), low carbon fuel standards (7.2%), vehicle efficiency measures 2.8%); does not assume 42% reduction in energy production emissions from the State's renewables portfolio standard (33%), natural gas extraction efficiency measures (1.6%), and natural gas transmission and distribution efficiency measures (7.4%).*
Source: DKA Planning, 2024.

Post-2030 Analysis

Recent studies show that the state's existing and proposed regulatory framework will put the state on a pathway to reduce its GHG emissions level to 40 percent below 1990 levels by 2030, and to 80 percent below 1990 levels by 2050 if additional appropriate reduction measures are adopted.[65] Even though these studies did not provide an exact regulatory and technological roadmap to achieve the 2030 and 2050 goals, they demonstrated that various combinations of policies could allow the statewide emissions level to remain very low through 2050, suggesting that the

65 Energy and Environmental Economics (E3). "Summary of the California State Agencies' PATHWAYS Project: Long-term Greenhouse Gas Reduction Scenarios" (April 2015); Greenblatt, Jeffrey, Energy Policy, "Modeling California Impacts on Greenhouse Gas Emissions" (Vol. 78, pp. 158–172). The California Air Resources Board, California Energy Commission, California Public Utilities Commission, and the California Independent System Operator engaged E3 to evaluate the feasibility and cost of a range of potential 2030 targets along the way to the state's goal of reducing GHG emissions to 80 percent below 1990 levels by 2050. With input from the agencies, E3 developed scenarios that explore the potential pace at which emission reductions can be achieved, as well as the mix of technologies and practices deployed. E3 conducted the analysis using its California PATHWAYS model. Enhanced specifically for this study, the model encompasses the entire California economy with detailed representations of the buildings, industry, transportation, and electricity sectors.

combination of new technologies and other regulations not analyzed in the studies could allow the state to meet the 2050 target. After the findings of these studies, SB 32 was passed on September 8, 2016, and would require the state board to ensure that statewide GHG emissions are reduced to 40 percent below the 1990 level by 2030. As discussed above, the new plan, outlined in SB 32, involves increasing renewable energy use, imposing tighter limits on the carbon content of gasoline and diesel fuel, putting more electric cars on the road, improving energy efficiency, and curbing emissions from key industries.

As discussed above, SCAG's 2024-2050 RTP/SCS establishes a regulatory framework for achieving GHG reductions from the land use and transportation sectors pursuant to SB 375 and the state's long-term climate policies. The 2024-2050 RTP/SCS ensures VMT reductions and other measures that reduce regional emissions from the land use and transportation sectors.

The Project is the type of land use development that is encouraged by the RTP/SCS to reduce VMT and expand multi-modal transportation options for the region to achieve the GHG reductions from the land use and transportation sectors required by SB 375, which, in turn, advances the state's long-term climate policies. By furthering implementation of SB 375, the Project supports regional land use and transportation GHG reductions consistent with state climate targets for 2020 and beyond. In addition, the Project would be consistent with the Actions and Strategies set forth in the 2024-2050 RTP/SCS. Therefore, the Project would be consistent with the 2024-2050 RTP/SCS.

Conclusion

Given the Project's consistency with state, SCAG, and City GHG emissions reduction goals and objectives, the Project is consistent with applicable plans, policies, and regulations adopted for the purpose of reducing the emissions of GHGs. In the absence of adopted standards and established significance thresholds, and given this consistency, it is concluded that the Project's incremental contribution to greenhouse gas emissions and their effects on climate change would not be cumulatively considerable.

Cumulative Impacts

As explained above, the analysis of a project's GHG emissions is inherently a cumulative impacts analysis, because climate change is a global problem, and the emissions from any single project alone would be negligible. Accordingly, the analysis above considered the potential for the Project to contribute to the cumulative impact of global climate change.

The analysis shows that the Project is consistent with CARB's *Climate Change Scoping Plan*, particularly its emphasis on the identification of emission reduction opportunities that promote economic growth while achieving greater energy efficiency and accelerating the transition to a low-carbon economy. The analysis also shows that the Project would be consistent with the 2024-2050 RTP/SCS, which would serve to reduce regional GHG emissions from the land use and transportation sectors by 2020 and 2035. In addition, the Project would comply with the LA Green

Plan, which emphasizes improving energy conservation and energy efficiency, increasing renewable energy generation, and changing transportation and land use patterns to reduce auto dependence. Furthermore, the Project would generally comply with the aspirations of the City's General Plan and CAP, which includes specific targets related to housing and development, and mobility and transit. Given the Project's consistency with statewide, regional, and local plans adopted for the reduction of GHG emissions, it is concluded that the Project's incremental contribution to greenhouse gas emissions and their effects on climate change would not be cumulatively considerable. For these reasons, the Project's cumulative contribution to global climate change is less than significant.

TECHNICAL APPENDIX



DouglasKim+Associates,LLC

GREENHOUSE GAS EMISSIONS OVERVIEW

21212 Avalon Boulevard Project
GHG Emissions Impact Compared to "Project Without Reduction Features" Scenario

Source	Project Without Reduction Features (2026)	As Proposed (2026)	Reduction from Project Without Reduction Features	Change from Project Without Reduction Features Scenario
Area	10	10	-	0%
Energy	1,278	741	(537)	-42%
Mobile	7,783	5,464	(2,319)	-30%
Waste	84	84	-	0%
Water	30	30	-	0%
Refrigerants	1	1	-	0%
Vegetation	(10)	(10)		
Construction	56	56	-	0%
Total Emissions	9,232	6,375	(2,856)	-30.9%



DouglasKim+Associates,LLC

FUTURE EMISSIONS

21212 Avalon Boulevard (Future) Detailed Report

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1.1. Basic Project Information

Data Field	Value
Project Name	21212 Avalon Boulevard (Future)
Construction Start Date	1/1/2025
Operational Year	2026
Lead Agency	City of Carson
Land Use Scale	Project/site
Analysis Level for Defaults	County
Windspeed (m/s)	3.50
Precipitation (days)	17.4
Location	21212 Avalon Blvd, Carson, CA 90745, USA
County	Los Angeles-South Coast
City	Carson
Air District	South Coast AQMD
Air Basin	South Coast
TAZ	4617
EDFZ	7
Electric Utility	Southern California Edison
Gas Utility	Southern California Gas
App Version	2022.1.1.26

1.2. Land Use Types

Land Use Subtype	Size	Unit	Lot Acreage	Building Area (sq ft)	Landscape Area (sq ft)	Special Landscape Area (sq ft)	Population	Description
Apartments Low Rise	29.0	Dwelling Unit	2.00	14,384	0.00	—	100	—

Condo/Townhouse	283	Dwelling Unit	9.00	434,321	127,420	—	971	—
Enclosed Parking Structure	566	Space	2.07	226,400	0.00	—	—	—
Parking Lot	92.0	Space	1.00	0.00	0.00	—	—	—

1.3. User-Selected Emission Reduction Measures by Emissions Sector

No measures selected

2. Emissions Summary

2.1. Construction Emissions Compared Against Thresholds

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Un/Mit.	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—
Unmit.	—	14,677	14,677	0.69	1.73	26.3	15,236
Daily, Winter (Max)	—	—	—	—	—	—	—
Unmit.	—	14,666	14,666	0.69	1.73	0.68	15,199
Average Daily (Max)	—	—	—	—	—	—	—
Unmit.	—	6,558	6,558	0.29	0.50	4.21	6,718
Annual (Max)	—	—	—	—	—	—	—
Unmit.	—	1,086	1,086	0.05	0.08	0.70	1,112

2.2. Construction Emissions by Year, Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Year	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily - Summer (Max)	—	—	—	—	—	—	—
2025	—	14,677	14,677	0.69	1.73	26.3	15,236
2026	—	9,926	9,926	0.41	0.52	23.5	10,113
Daily - Winter (Max)	—	—	—	—	—	—	—

2025	—	14,666	14,666	0.69	1.73	0.68	15,199
2026	—	9,657	9,657	0.42	0.52	0.61	9,821
Average Daily	—	—	—	—	—	—	—
2025	—	6,558	6,558	0.29	0.50	4.21	6,718
2026	—	3,446	3,446	0.15	0.18	3.60	3,508
Annual	—	—	—	—	—	—	—
2025	—	1,086	1,086	0.05	0.08	0.70	1,112
2026	—	571	571	0.02	0.03	0.60	581

2.4. Operations Emissions Compared Against Thresholds

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Un/Mit.	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—
Unmit.	166	38,166	38,332	18.4	1.24	118	39,281
Daily, Winter (Max)	—	—	—	—	—	—	—
Unmit.	166	36,650	36,817	18.4	1.30	6.19	37,671
Average Daily (Max)	—	—	—	—	—	—	—
Unmit.	166	37,095	37,261	18.4	1.31	52.8	38,165
Annual (Max)	—	—	—	—	—	—	—
Unmit.	27.6	6,141	6,169	3.05	0.22	8.74	6,319

2.5. Operations Emissions by Sector, Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Sector	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—
Mobile	—	33,596	33,596	1.27	1.16	115	34,088
Area	0.00	87.8	87.8	< 0.005	< 0.005	—	88.1
Energy	—	4,457	4,457	0.41	0.03	—	4,476

Water	22.3	86.1	108	2.29	0.06	—	182
Waste	144	0.00	144	14.4	0.00	—	504
Refrig.	—	—	—	—	—	3.21	3.21
Vegetation	—	-61.8	-61.8	—	—	—	-61.8
Total	166	38,166	38,332	18.4	1.24	118	39,281
Daily, Winter (Max)	—	—	—	—	—	—	—
Mobile	—	32,169	32,169	1.29	1.22	2.98	32,567
Area	0.00	0.00	0.00	0.00	0.00	—	0.00
Energy	—	4,457	4,457	0.41	0.03	—	4,476
Water	22.3	86.1	108	2.29	0.06	—	182
Waste	144	0.00	144	14.4	0.00	—	504
Refrig.	—	—	—	—	—	3.21	3.21
Vegetation	—	-61.8	-61.8	—	—	—	-61.8
Total	166	36,650	36,817	18.4	1.30	6.19	37,671
Average Daily	—	—	—	—	—	—	—
Mobile	—	32,553	32,553	1.29	1.23	49.6	33,000
Area	0.00	60.1	60.1	< 0.005	< 0.005	—	60.4
Energy	—	4,457	4,457	0.41	0.03	—	4,476
Water	22.3	86.1	108	2.29	0.06	—	182
Waste	144	0.00	144	14.4	0.00	—	504
Refrig.	—	—	—	—	—	3.21	3.21
Vegetation	—	-61.8	-61.8	—	—	—	-61.8
Total	166	37,095	37,261	18.4	1.31	52.8	38,165
Annual	—	—	—	—	—	—	—
Mobile	—	5,390	5,390	0.21	0.20	8.21	5,464
Area	0.00	9.96	9.96	< 0.005	< 0.005	—	9.99
Energy	—	738	738	0.07	< 0.005	—	741
Water	3.69	14.3	17.9	0.38	0.01	—	30.2

Waste	23.9	0.00	23.9	2.39	0.00	—	83.5
Refrig.	—	—	—	—	—	0.53	0.53
Vegetation	—	-10.2	-10.2	—	—	—	-10.2
Total	27.6	6,141	6,169	3.05	0.22	8.74	6,319

3. Construction Emissions Details

3.1. Demolition (2025) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—
Off-Road Equipment	—	3,425	3,425	0.14	0.03	—	3,437
Demolition	—	—	—	—	—	—	—
Onsite truck	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—
Off-Road Equipment	—	3,425	3,425	0.14	0.03	—	3,437
Demolition	—	—	—	—	—	—	—
Onsite truck	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—
Off-Road Equipment	—	807	807	0.03	0.01	—	810
Demolition	—	—	—	—	—	—	—
Onsite truck	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—
Off-Road Equipment	—	134	134	0.01	< 0.005	—	134
Demolition	—	—	—	—	—	—	—
Onsite truck	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—

Daily, Summer (Max)	—	—	—	—	—	—	—
Worker	—	207	207	0.01	0.01	0.76	210
Vendor	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	—	10,802	10,802	0.53	1.69	25.4	11,345
Daily, Winter (Max)	—	—	—	—	—	—	—
Worker	—	197	197	0.01	0.01	0.02	199
Vendor	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	—	10,804	10,804	0.53	1.69	0.66	11,322
Average Daily	—	—	—	—	—	—	—
Worker	—	47.0	47.0	< 0.005	< 0.005	0.08	47.6
Vendor	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	—	2,545	2,545	0.13	0.40	2.59	2,670
Annual	—	—	—	—	—	—	—
Worker	—	7.78	7.78	< 0.005	< 0.005	0.01	7.89
Vendor	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	—	421	421	0.02	0.07	0.43	442

3.3. Grading (2025) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—
Off-Road Equipment	—	6,599	6,599	0.27	0.05	—	6,622
Dust From Material Movement	—	—	—	—	—	—	—
Onsite truck	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—

Off-Road Equipment	—	1,573	1,573	0.06	0.01	—	1,578
Dust From Material Movement	—	—	—	—	—	—	—
Onsite truck	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—
Off-Road Equipment	—	260	260	0.01	< 0.005	—	261
Dust From Material Movement	—	—	—	—	—	—	—
Onsite truck	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—
Worker	—	277	277	0.01	0.01	1.01	281
Vendor	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	—	299	299	0.02	0.05	0.69	314
Daily, Winter (Max)	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—
Worker	—	63.4	63.4	< 0.005	< 0.005	0.10	64.3
Vendor	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	—	71.2	71.2	< 0.005	0.01	0.07	74.7
Annual	—	—	—	—	—	—	—
Worker	—	10.5	10.5	< 0.005	< 0.005	0.02	10.6
Vendor	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	—	11.8	11.8	< 0.005	< 0.005	0.01	12.4

3.5. Building Construction (2025) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—

Daily, Winter (Max)	—	—	—	—	—	—	—
Off-Road Equipment	—	2,398	2,398	0.10	0.02	—	2,406
Onsite truck	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—
Off-Road Equipment	—	286	286	0.01	< 0.005	—	287
Onsite truck	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—
Off-Road Equipment	—	47.4	47.4	< 0.005	< 0.005	—	47.5
Onsite truck	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—
Worker	—	4,190	4,190	0.19	0.16	0.42	4,243
Vendor	—	2,236	2,236	0.09	0.31	0.16	2,332
Hauling	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—
Worker	—	508	508	0.02	0.02	0.83	514
Vendor	—	267	267	0.01	0.04	0.32	279
Hauling	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—
Worker	—	84.0	84.0	< 0.005	< 0.005	0.14	85.2
Vendor	—	44.2	44.2	< 0.005	0.01	0.05	46.1
Hauling	—	0.00	0.00	0.00	0.00	0.00	0.00

3.7. Building Construction (2026) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—

Daily, Summer (Max)	—	—	—	—	—	—	—
Off-Road Equipment	—	2,397	2,397	0.10	0.02	—	2,405
Onsite truck	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—
Off-Road Equipment	—	2,397	2,397	0.10	0.02	—	2,405
Onsite truck	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—
Off-Road Equipment	—	849	849	0.03	0.01	—	852
Onsite truck	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—
Off-Road Equipment	—	141	141	0.01	< 0.005	—	141
Onsite truck	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—
Worker	—	4,332	4,332	0.18	0.15	14.7	4,396
Vendor	—	2,197	2,197	0.09	0.31	5.94	2,298
Hauling	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—
Worker	—	4,107	4,107	0.19	0.15	0.38	4,157
Vendor	—	2,198	2,198	0.09	0.31	0.15	2,294
Hauling	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—
Worker	—	1,476	1,476	0.07	0.05	2.25	1,496
Vendor	—	778	778	0.03	0.11	0.91	813
Hauling	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—
Worker	—	244	244	0.01	0.01	0.37	248
Vendor	—	129	129	0.01	0.02	0.15	135

Hauling	—	0.00	0.00	0.00	0.00	0.00	0.00

3.9. Paving (2025) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—
Off-Road Equipment	—	1,511	1,511	0.06	0.01	—	1,517
Paving	—	—	—	—	—	—	—
Onsite truck	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—
Off-Road Equipment	—	178	178	0.01	< 0.005	—	179
Paving	—	—	—	—	—	—	—
Onsite truck	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—
Off-Road Equipment	—	29.5	29.5	< 0.005	< 0.005	—	29.6
Paving	—	—	—	—	—	—	—
Onsite truck	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—
Worker	—	207	207	0.01	0.01	0.76	210
Vendor	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—
Worker	—	23.5	23.5	< 0.005	< 0.005	0.04	23.8
Vendor	—	0.00	0.00	0.00	0.00	0.00	0.00

Hauling	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—
Worker	—	3.89	3.89	< 0.005	< 0.005	0.01	3.94
Vendor	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	—	0.00	0.00	0.00	0.00	0.00	0.00

3.11. Architectural Coating (2025) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—
Off-Road Equipment	—	134	134	0.01	< 0.005	—	134
Architectural Coatings	—	—	—	—	—	—	—
Onsite truck	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—
Off-Road Equipment	—	15.9	15.9	< 0.005	< 0.005	—	16.0
Architectural Coatings	—	—	—	—	—	—	—
Onsite truck	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—
Off-Road Equipment	—	2.64	2.64	< 0.005	< 0.005	—	2.65
Architectural Coatings	—	—	—	—	—	—	—
Onsite truck	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—
Worker	—	838	838	0.04	0.03	0.08	849
Vendor	—	0.00	0.00	0.00	0.00	0.00	0.00

Hauling	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—
Worker	—	102	102	< 0.005	< 0.005	0.17	103
Vendor	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—
Worker	—	16.8	16.8	< 0.005	< 0.005	0.03	17.0
Vendor	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	—	0.00	0.00	0.00	0.00	0.00	0.00

3.13. Architectural Coating (2026) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—
Off-Road Equipment	—	134	134	0.01	< 0.005	—	134
Architectural Coatings	—	—	—	—	—	—	—
Onsite truck	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—
Off-Road Equipment	—	134	134	0.01	< 0.005	—	134
Architectural Coatings	—	—	—	—	—	—	—
Onsite truck	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—
Off-Road Equipment	—	47.3	47.3	< 0.005	< 0.005	—	47.5
Architectural Coatings	—	—	—	—	—	—	—
Onsite truck	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—
Off-Road Equipment	—	7.83	7.83	< 0.005	< 0.005	—	7.86

Architectural Coatings	—	—	—	—	—	—	—
Onsite truck	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—
Worker	—	866	866	0.04	0.03	2.93	879
Vendor	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—
Worker	—	821	821	0.04	0.03	0.08	831
Vendor	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—
Worker	—	295	295	0.01	0.01	0.45	299
Vendor	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—
Worker	—	48.9	48.9	< 0.005	< 0.005	0.07	49.5
Vendor	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	—	0.00	0.00	0.00	0.00	0.00	0.00

3.15. Trenching (2025) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—
Off-Road Equipment	—	207	207	0.01	< 0.005	—	208
Onsite truck	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—

Off-Road Equipment	—	207	207	0.01	< 0.005	—	208
Onsite truck	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—
Off-Road Equipment	—	61.9	61.9	< 0.005	< 0.005	—	62.1
Onsite truck	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—
Off-Road Equipment	—	10.3	10.3	< 0.005	< 0.005	—	10.3
Onsite truck	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—
Worker	—	34.6	34.6	< 0.005	< 0.005	0.13	35.1
Vendor	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—
Worker	—	32.8	32.8	< 0.005	< 0.005	< 0.005	33.2
Vendor	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—
Worker	—	9.93	9.93	< 0.005	< 0.005	0.02	10.1
Vendor	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—
Worker	—	1.64	1.64	< 0.005	< 0.005	< 0.005	1.67
Vendor	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	—	0.00	0.00	0.00	0.00	0.00	0.00

4. Operations Emissions Details

4.1. Mobile Emissions by Land Use

4.1.1. Unmitigated

Mobile source emissions results are presented in Sections 2.6. No further detailed breakdown of emissions is available.

4.2. Energy

4.2.1. Electricity Emissions By Land Use - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—
Apartments Low Rise	—	105	105	0.01	< 0.005	—	106
Condo/Townhouse	—	1,233	1,233	0.12	0.01	—	1,240
Enclosed Parking Structure	—	752	752	0.07	0.01	—	756
Parking Lot	—	36.2	36.2	< 0.005	< 0.005	—	36.4
Total	—	2,126	2,126	0.20	0.02	—	2,139
Daily, Winter (Max)	—	—	—	—	—	—	—
Apartments Low Rise	—	105	105	0.01	< 0.005	—	106
Condo/Townhouse	—	1,233	1,233	0.12	0.01	—	1,240
Enclosed Parking Structure	—	752	752	0.07	0.01	—	756
Parking Lot	—	36.2	36.2	< 0.005	< 0.005	—	36.4
Total	—	2,126	2,126	0.20	0.02	—	2,139
Annual	—	—	—	—	—	—	—
Apartments Low Rise	—	17.5	17.5	< 0.005	< 0.005	—	17.6
Condo/Townhouse	—	204	204	0.02	< 0.005	—	205
Enclosed Parking Structure	—	124	124	0.01	< 0.005	—	125
Parking Lot	—	5.99	5.99	< 0.005	< 0.005	—	6.03

Total	—	352	352	0.03	< 0.005	—	354

4.2.3. Natural Gas Emissions By Land Use - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—
Apartments Low Rise	—	152	152	0.01	< 0.005	—	152
Condo/Townhouse	—	2,179	2,179	0.19	< 0.005	—	2,186
Enclosed Parking Structure	—	0.00	0.00	0.00	0.00	—	0.00
Parking Lot	—	0.00	0.00	0.00	0.00	—	0.00
Total	—	2,331	2,331	0.21	< 0.005	—	2,338
Daily, Winter (Max)	—	—	—	—	—	—	—
Apartments Low Rise	—	152	152	0.01	< 0.005	—	152
Condo/Townhouse	—	2,179	2,179	0.19	< 0.005	—	2,186
Enclosed Parking Structure	—	0.00	0.00	0.00	0.00	—	0.00
Parking Lot	—	0.00	0.00	0.00	0.00	—	0.00
Total	—	2,331	2,331	0.21	< 0.005	—	2,338
Annual	—	—	—	—	—	—	—
Apartments Low Rise	—	25.1	25.1	< 0.005	< 0.005	—	25.2
Condo/Townhouse	—	361	361	0.03	< 0.005	—	362
Enclosed Parking Structure	—	0.00	0.00	0.00	0.00	—	0.00
Parking Lot	—	0.00	0.00	0.00	0.00	—	0.00
Total	—	386	386	0.03	< 0.005	—	387

4.3. Area Emissions by Source

4.3.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Source	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—
Hearths	0.00	0.00	0.00	0.00	0.00	—	0.00
Consumer Products	—	—	—	—	—	—	—
Architectural Coatings	—	—	—	—	—	—	—
Landscape Equipment	—	87.8	87.8	< 0.005	< 0.005	—	88.1
Total	0.00	87.8	87.8	< 0.005	< 0.005	—	88.1
Daily, Winter (Max)	—	—	—	—	—	—	—
Hearths	0.00	0.00	0.00	0.00	0.00	—	0.00
Consumer Products	—	—	—	—	—	—	—
Architectural Coatings	—	—	—	—	—	—	—
Total	0.00	0.00	0.00	0.00	0.00	—	0.00
Annual	—	—	—	—	—	—	—
Hearths	0.00	0.00	0.00	0.00	0.00	—	0.00
Consumer Products	—	—	—	—	—	—	—
Architectural Coatings	—	—	—	—	—	—	—
Landscape Equipment	—	9.96	9.96	< 0.005	< 0.005	—	9.99
Total	0.00	9.96	9.96	< 0.005	< 0.005	—	9.99

4.4. Water Emissions by Land Use

4.4.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—
Apartments Low Rise	2.07	6.98	9.05	0.21	0.01	—	15.9

Condo/Townhouse	20.2	79.1	99.3	2.08	0.05	—	166
Enclosed Parking Structure	0.00	0.00	0.00	0.00	0.00	—	0.00
Parking Lot	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	22.3	86.1	108	2.29	0.06	—	182
Daily, Winter (Max)	—	—	—	—	—	—	—
Apartments Low Rise	2.07	6.98	9.05	0.21	0.01	—	15.9
Condo/Townhouse	20.2	79.1	99.3	2.08	0.05	—	166
Enclosed Parking Structure	0.00	0.00	0.00	0.00	0.00	—	0.00
Parking Lot	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	22.3	86.1	108	2.29	0.06	—	182
Annual	—	—	—	—	—	—	—
Apartments Low Rise	0.34	1.16	1.50	0.04	< 0.005	—	2.63
Condo/Townhouse	3.35	13.1	16.4	0.34	0.01	—	27.5
Enclosed Parking Structure	0.00	0.00	0.00	0.00	0.00	—	0.00
Parking Lot	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	3.69	14.3	17.9	0.38	0.01	—	30.2

4.5. Waste Emissions by Land Use

4.5.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—
Apartments Low Rise	13.5	0.00	13.5	1.35	0.00	—	47.1
Condo/Townhouse	131	0.00	131	13.1	0.00	—	457
Enclosed Parking Structure	0.00	0.00	0.00	0.00	0.00	—	0.00

Parking Lot	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	144	0.00	144	14.4	0.00	—	504
Daily, Winter (Max)	—	—	—	—	—	—	—
Apartments Low Rise	13.5	0.00	13.5	1.35	0.00	—	47.1
Condo/Townhouse	131	0.00	131	13.1	0.00	—	457
Enclosed Parking Structure	0.00	0.00	0.00	0.00	0.00	—	0.00
Parking Lot	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	144	0.00	144	14.4	0.00	—	504
Annual	—	—	—	—	—	—	—
Apartments Low Rise	2.23	0.00	2.23	0.22	0.00	—	7.80
Condo/Townhouse	21.6	0.00	21.6	2.16	0.00	—	75.7
Enclosed Parking Structure	0.00	0.00	0.00	0.00	0.00	—	0.00
Parking Lot	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	23.9	0.00	23.9	2.39	0.00	—	83.5

4.6. Refrigerant Emissions by Land Use

4.6.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—
Apartments Low Rise	—	—	—	—	—	0.10	0.10
Condo/Townhouse	—	—	—	—	—	3.11	3.11
Total	—	—	—	—	—	3.21	3.21
Daily, Winter (Max)	—	—	—	—	—	—	—
Apartments Low Rise	—	—	—	—	—	0.10	0.10
Condo/Townhouse	—	—	—	—	—	3.11	3.11

Total	—	—	—	—	—	3.21	3.21
Annual	—	—	—	—	—	—	—
Apartments Low Rise	—	—	—	—	—	0.02	0.02
Condo/Townhouse	—	—	—	—	—	0.51	0.51
Total	—	—	—	—	—	0.53	0.53

4.7. Offroad Emissions By Equipment Type

4.7.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Equipment Type	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—

4.8. Stationary Emissions By Equipment Type

4.8.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Equipment Type	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—

Total	—	—	—	—	—	—	—

4.9. User Defined Emissions By Equipment Type

4.9.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Equipment Type	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—

4.10. Soil Carbon Accumulation By Vegetation Type

4.10.1. Soil Carbon Accumulation By Vegetation Type - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Vegetation	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—

4.10.2. Above and Belowground Carbon Accumulation by Land Use Type - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—

4.10.3. Avoided and Sequestered Emissions by Species - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Species	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—
Olive	—	-1.73	-1.73	—	—	—	-1.73
Chinese Pistache	—	-0.61	-0.61	—	—	—	-0.61
Sycamore	—	0.33	0.33	—	—	—	0.33
Quercus Acutifolia	—	4.00	4.00	—	—	—	4.00
Coastal Live Oak	—	2.07	2.07	—	—	—	2.07
Chinese Elm	—	0.29	0.29	—	—	—	0.29
Fern Tree	—	-0.05	-0.05	—	—	—	-0.05
Tristania	—	2.23	2.23	—	—	—	2.23
Ulmus	—	-0.50	-0.50	—	—	—	-0.50
Strawberry Tree	—	-0.80	-0.80	—	—	—	-0.80
Magnolia	—	0.30	0.30	—	—	—	0.30
Wilga	—	0.66	0.66	—	—	—	0.66
Guava Crape Myrtle	—	0.24	0.24	—	—	—	0.24
Date Palm	—	0.09	0.09	—	—	—	0.09
Bay	—	-0.30	-0.30	—	—	—	-0.30

African Sumac	—	0.53	0.53	—	—	—	0.53
Subtotal	—	6.75	6.75	—	—	—	6.75
Sequestered	—	—	—	—	—	—	—
Olive	—	-2.48	-2.48	—	—	—	-2.48
Chinese Pistache	—	-5.91	-5.91	—	—	—	-5.91
Sycamore	—	-3.59	-3.59	—	—	—	-3.59
Quercus Acutifolia	—	-2.74	-2.74	—	—	—	-2.74
Coastal Live Oak	—	-3.60	-3.60	—	—	—	-3.60
Chinese Elm	—	-13.2	-13.2	—	—	—	-13.2
Fern Tree	—	-6.36	-6.36	—	—	—	-6.36
Tristania	—	-11.6	-11.6	—	—	—	-11.6
Ulmus	—	-4.83	-4.83	—	—	—	-4.83
Strawberry Tree	—	-1.11	-1.11	—	—	—	-1.11
Magnolia	—	-3.02	-3.02	—	—	—	-3.02
Wilga	—	-1.86	-1.86	—	—	—	-1.86
Guava Crape Myrtle	—	-3.30	-3.30	—	—	—	-3.30
Date Palm	—	-0.14	-0.14	—	—	—	-0.14
Bay	—	-3.62	-3.62	—	—	—	-3.62
African Sumac	—	-1.19	-1.19	—	—	—	-1.19
Subtotal	—	-68.6	-68.6	—	—	—	-68.6
Removed	—	—	—	—	—	—	—
Olive	—	—	—	—	—	—	—
Chinese Pistache	—	—	—	—	—	—	—
Sycamore	—	—	—	—	—	—	—
Quercus Acutifolia	—	—	—	—	—	—	—
Coastal Live Oak	—	—	—	—	—	—	—
Chinese Elm	—	—	—	—	—	—	—
Fern Tree	—	—	—	—	—	—	—

Tristania	—	—	—	—	—	—	—
Ulmus	—	—	—	—	—	—	—
Strawberry Tree	—	—	—	—	—	—	—
Magnolia	—	—	—	—	—	—	—
Wilga	—	—	—	—	—	—	—
Guava Crape Myrtle	—	—	—	—	—	—	—
Date Palm	—	—	—	—	—	—	—
Bay	—	—	—	—	—	—	—
African Sumac	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—
Total	—	-61.8	-61.8	—	—	—	-61.8
Daily, Winter (Max)	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—
Olive	—	-1.73	-1.73	—	—	—	-1.73
Chinese Pistache	—	-0.61	-0.61	—	—	—	-0.61
Sycamore	—	0.33	0.33	—	—	—	0.33
Quercus Acutifolia	—	4.00	4.00	—	—	—	4.00
Coastal Live Oak	—	2.07	2.07	—	—	—	2.07
Chinese Elm	—	0.29	0.29	—	—	—	0.29
Fern Tree	—	-0.05	-0.05	—	—	—	-0.05
Tristania	—	2.23	2.23	—	—	—	2.23
Ulmus	—	-0.50	-0.50	—	—	—	-0.50
Strawberry Tree	—	-0.80	-0.80	—	—	—	-0.80
Magnolia	—	0.30	0.30	—	—	—	0.30
Wilga	—	0.66	0.66	—	—	—	0.66
Guava Crape Myrtle	—	0.24	0.24	—	—	—	0.24
Date Palm	—	0.09	0.09	—	—	—	0.09

Bay	—	-0.30	-0.30	—	—	—	-0.30
African Sumac	—	0.53	0.53	—	—	—	0.53
Subtotal	—	6.75	6.75	—	—	—	6.75
Sequestered	—	—	—	—	—	—	—
Olive	—	-2.48	-2.48	—	—	—	-2.48
Chinese Pistache	—	-5.91	-5.91	—	—	—	-5.91
Sycamore	—	-3.59	-3.59	—	—	—	-3.59
Quercus Acutifolia	—	-2.74	-2.74	—	—	—	-2.74
Coastal Live Oak	—	-3.60	-3.60	—	—	—	-3.60
Chinese Elm	—	-13.2	-13.2	—	—	—	-13.2
Fern Tree	—	-6.36	-6.36	—	—	—	-6.36
Tristania	—	-11.6	-11.6	—	—	—	-11.6
Ulmus	—	-4.83	-4.83	—	—	—	-4.83
Strawberry Tree	—	-1.11	-1.11	—	—	—	-1.11
Magnolia	—	-3.02	-3.02	—	—	—	-3.02
Wilga	—	-1.86	-1.86	—	—	—	-1.86
Guava Crape Myrtle	—	-3.30	-3.30	—	—	—	-3.30
Date Palm	—	-0.14	-0.14	—	—	—	-0.14
Bay	—	-3.62	-3.62	—	—	—	-3.62
African Sumac	—	-1.19	-1.19	—	—	—	-1.19
Subtotal	—	-68.6	-68.6	—	—	—	-68.6
Removed	—	—	—	—	—	—	—
Olive	—	—	—	—	—	—	—
Chinese Pistache	—	—	—	—	—	—	—
Sycamore	—	—	—	—	—	—	—
Quercus Acutifolia	—	—	—	—	—	—	—
Coastal Live Oak	—	—	—	—	—	—	—
Chinese Elm	—	—	—	—	—	—	—

Fern Tree	—	—	—	—	—	—	—
Tristania	—	—	—	—	—	—	—
Ulmus	—	—	—	—	—	—	—
Strawberry Tree	—	—	—	—	—	—	—
Magnolia	—	—	—	—	—	—	—
Wilga	—	—	—	—	—	—	—
Guava Crape Myrtle	—	—	—	—	—	—	—
Date Palm	—	—	—	—	—	—	—
Bay	—	—	—	—	—	—	—
African Sumac	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—
Total	—	-61.8	-61.8	—	—	—	-61.8
Annual	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—
Olive	—	-0.29	-0.29	—	—	—	-0.29
Chinese Pistache	—	-0.10	-0.10	—	—	—	-0.10
Sycamore	—	0.05	0.05	—	—	—	0.05
Quercus Acutifolia	—	0.66	0.66	—	—	—	0.66
Coastal Live Oak	—	0.34	0.34	—	—	—	0.34
Chinese Elm	—	0.05	0.05	—	—	—	0.05
Fern Tree	—	-0.01	-0.01	—	—	—	-0.01
Tristania	—	0.37	0.37	—	—	—	0.37
Ulmus	—	-0.08	-0.08	—	—	—	-0.08
Strawberry Tree	—	-0.13	-0.13	—	—	—	-0.13
Magnolia	—	0.05	0.05	—	—	—	0.05
Wilga	—	0.11	0.11	—	—	—	0.11
Guava Crape Myrtle	—	0.04	0.04	—	—	—	0.04

Date Palm	—	0.02	0.02	—	—	—	0.02
Bay	—	-0.05	-0.05	—	—	—	-0.05
African Sumac	—	0.09	0.09	—	—	—	0.09
Subtotal	—	1.12	1.12	—	—	—	1.12
Sequestered	—	—	—	—	—	—	—
Olive	—	-0.41	-0.41	—	—	—	-0.41
Chinese Pistache	—	-0.98	-0.98	—	—	—	-0.98
Sycamore	—	-0.59	-0.59	—	—	—	-0.59
Quercus Acutifolia	—	-0.45	-0.45	—	—	—	-0.45
Coastal Live Oak	—	-0.60	-0.60	—	—	—	-0.60
Chinese Elm	—	-2.19	-2.19	—	—	—	-2.19
Fern Tree	—	-1.05	-1.05	—	—	—	-1.05
Tristania	—	-1.92	-1.92	—	—	—	-1.92
Ulmus	—	-0.80	-0.80	—	—	—	-0.80
Strawberry Tree	—	-0.18	-0.18	—	—	—	-0.18
Magnolia	—	-0.50	-0.50	—	—	—	-0.50
Wilga	—	-0.31	-0.31	—	—	—	-0.31
Guava Crape Myrtle	—	-0.55	-0.55	—	—	—	-0.55
Date Palm	—	-0.02	-0.02	—	—	—	-0.02
Bay	—	-0.60	-0.60	—	—	—	-0.60
African Sumac	—	-0.20	-0.20	—	—	—	-0.20
Subtotal	—	-11.4	-11.4	—	—	—	-11.4
Removed	—	—	—	—	—	—	—
Olive	—	—	—	—	—	—	—
Chinese Pistache	—	—	—	—	—	—	—
Sycamore	—	—	—	—	—	—	—
Quercus Acutifolia	—	—	—	—	—	—	—
Coastal Live Oak	—	—	—	—	—	—	—

Chinese Elm	—	—	—	—	—	—	—
Fern Tree	—	—	—	—	—	—	—
Tristania	—	—	—	—	—	—	—
Ulmus	—	—	—	—	—	—	—
Strawberry Tree	—	—	—	—	—	—	—
Magnolia	—	—	—	—	—	—	—
Wilga	—	—	—	—	—	—	—
Guava Crape Myrtle	—	—	—	—	—	—	—
Date Palm	—	—	—	—	—	—	—
Bay	—	—	—	—	—	—	—
African Sumac	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—
Total	—	-10.2	-10.2	—	—	—	-10.2

5. Activity Data

5.1. Construction Schedule

Phase Name	Phase Type	Start Date	End Date	Days Per Week	Work Days per Phase	Phase Description
Demolition	Demolition	1/1/2025	4/30/2025	5.00	86.0	—
Grading	Grading	5/1/2025	8/31/2025	5.00	87.0	—
Building Construction	Building Construction	11/1/2025	6/30/2026	5.00	172	—
Paving	Paving	8/1/2025	9/30/2025	5.00	43.0	—
Architectural Coating	Architectural Coating	11/1/2025	6/30/2026	5.00	172	—
Trenching	Trenching	3/1/2025	7/31/2025	5.00	109	—

5.2. Off-Road Equipment

5.2.1. Unmitigated

Phase Name	Equipment Type	Fuel Type	Engine Tier	Number per Day	Hours Per Day	Horsepower	Load Factor
Demolition	Concrete/Industrial Saws	Diesel	Average	1.00	8.00	33.0	0.73
Demolition	Excavators	Diesel	Average	3.00	8.00	36.0	0.38
Demolition	Rubber Tired Dozers	Diesel	Average	2.00	8.00	367	0.40
Grading	Excavators	Diesel	Average	2.00	8.00	36.0	0.38
Grading	Graders	Diesel	Average	1.00	8.00	148	0.41
Grading	Rubber Tired Dozers	Diesel	Average	1.00	8.00	367	0.40
Grading	Scrapers	Diesel	Average	2.00	8.00	423	0.48
Grading	Tractors/Loaders/Backhoes	Diesel	Average	2.00	8.00	84.0	0.37
Building Construction	Cranes	Diesel	Average	1.00	7.00	367	0.29
Building Construction	Forklifts	Diesel	Average	3.00	8.00	82.0	0.20
Building Construction	Generator Sets	Diesel	Average	1.00	8.00	14.0	0.74
Building Construction	Tractors/Loaders/Backhoes	Diesel	Average	3.00	7.00	84.0	0.37
Building Construction	Welders	Diesel	Average	1.00	8.00	46.0	0.45
Paving	Pavers	Diesel	Average	2.00	8.00	81.0	0.42
Paving	Paving Equipment	Diesel	Average	2.00	8.00	89.0	0.36
Paving	Rollers	Diesel	Average	2.00	8.00	36.0	0.38
Architectural Coating	Air Compressors	Diesel	Average	1.00	6.00	37.0	0.48
Trenching	Trenchers	Diesel	Average	1.00	8.00	40.0	0.50

5.3. Construction Vehicles

5.3.1. Unmitigated

Phase Name	Trip Type	One-Way Trips per Day	Miles per Trip	Vehicle Mix
Demolition	—	—	—	—

Demolition	Worker	15.0	18.5	LDA,LDT1,LDT2
Demolition	Vendor	—	10.2	HHDT,MHDT
Demolition	Hauling	63.3	50.0	HHDT
Demolition	Onsite truck	—	—	HHDT
Grading	—	—	—	—
Grading	Worker	20.0	18.5	LDA,LDT1,LDT2
Grading	Vendor	—	10.2	HHDT,MHDT
Grading	Hauling	4.31	20.0	HHDT
Grading	Onsite truck	—	—	HHDT
Building Construction	—	—	—	—
Building Construction	Worker	320	18.5	LDA,LDT1,LDT2
Building Construction	Vendor	70.5	10.2	HHDT,MHDT
Building Construction	Hauling	0.00	20.0	HHDT
Building Construction	Onsite truck	—	—	HHDT
Paving	—	—	—	—
Paving	Worker	15.0	18.5	LDA,LDT1,LDT2
Paving	Vendor	—	10.2	HHDT,MHDT
Paving	Hauling	0.00	20.0	HHDT
Paving	Onsite truck	—	—	HHDT
Architectural Coating	—	—	—	—
Architectural Coating	Worker	63.9	18.5	LDA,LDT1,LDT2
Architectural Coating	Vendor	—	10.2	HHDT,MHDT
Architectural Coating	Hauling	0.00	20.0	HHDT
Architectural Coating	Onsite truck	—	—	HHDT
Trenching	—	—	—	—
Trenching	Worker	2.50	18.5	LDA,LDT1,LDT2
Trenching	Vendor	—	10.2	HHDT,MHDT
Trenching	Hauling	0.00	20.0	HHDT

Trenching	Onsite truck	—	—	HHDT

5.4. Vehicles

5.4.1. Construction Vehicle Control Strategies

Non-applicable. No control strategies activated by user.

5.5. Architectural Coatings

Phase Name	Residential Interior Area Coated (sq ft)	Residential Exterior Area Coated (sq ft)	Non-Residential Interior Area Coated (sq ft)	Non-Residential Exterior Area Coated (sq ft)	Parking Area Coated (sq ft)
Architectural Coating	908,628	302,876	4,058	451	8,024

5.6. Dust Mitigation

5.6.1. Construction Earthmoving Activities

Phase Name	Material Imported (Cubic Yards)	Material Exported (Cubic Yards)	Acres Graded (acres)	Material Demolished (Ton of Debris)	Acres Paved (acres)
Demolition	0.00	0.00	0.00	21,775	—
Grading	3,000	—	261	0.00	—
Paving	0.00	0.00	0.00	0.00	3.07

5.6.2. Construction Earthmoving Control Strategies

Control Strategies Applied	Frequency (per day)	PM10 Reduction	PM2.5 Reduction
Water Exposed Area	2	61%	61%
Water Demolished Area	2	36%	36%

5.7. Construction Paving

Land Use	Area Paved (acres)	% Asphalt
Apartments Low Rise	—	0%

Condo/Townhouse	—	0%
Enclosed Parking Structure	2.07	100%
Parking Lot	1.00	100%

5.8. Construction Electricity Consumption and Emissions Factors

kWh per Year and Emission Factor (lb/MWh)

Year	kWh per Year	CO2	CH4	N2O
2025	0.00	349	0.03	< 0.005
2026	0.00	346	0.03	< 0.005

5.9. Operational Mobile Sources

5.9.1. Unmitigated

Land Use Type	Trips/Weekday	Trips/Saturday	Trips/Sunday	Trips/Year	VMT/Weekday	VMT/Saturday	VMT/Sunday	VMT/Year
Total all Land Uses	2,350	2,350	2,350	857,750	43,240	43,240	43,240	15,782,600

5.10. Operational Area Sources

5.10.1. Hearths

5.10.1.1. Unmitigated

Hearth Type	Unmitigated (number)
Apartments Low Rise	—
Wood Fireplaces	0
Gas Fireplaces	0
Propane Fireplaces	0
Electric Fireplaces	0
No Fireplaces	29

Conventional Wood Stoves	0
Catalytic Wood Stoves	0
Non-Catalytic Wood Stoves	0
Pellet Wood Stoves	0
Condo/Townhouse	—
Wood Fireplaces	0
Gas Fireplaces	0
Propane Fireplaces	0
Electric Fireplaces	0
No Fireplaces	283
Conventional Wood Stoves	0
Catalytic Wood Stoves	0
Non-Catalytic Wood Stoves	0
Pellet Wood Stoves	0

5.10.2. Architectural Coatings

Residential Interior Area Coated (sq ft)	Residential Exterior Area Coated (sq ft)	Non-Residential Interior Area Coated (sq ft)	Non-Residential Exterior Area Coated (sq ft)	Parking Area Coated (sq ft)
908627.625	302,876	4,058	451	8,024

5.10.3. Landscape Equipment

Season	Unit	Value
Snow Days	day/yr	0.00
Summer Days	day/yr	250

5.11. Operational Energy Consumption

5.11.1. Unmitigated

Electricity (kWh/yr) and CO2 and CH4 and N2O and Natural Gas (kBTU/yr)

Land Use	Electricity (kWh/yr)	CO2	CH4	N2O	Natural Gas (kBTU/yr)
Apartments Low Rise	111,216	346	0.0330	0.0040	472,865
Condo/Townhouse	1,299,583	346	0.0330	0.0040	6,800,591
Enclosed Parking Structure	792,724	346	0.0330	0.0040	0.00
Parking Lot	38,159	346	0.0330	0.0040	0.00

5.12. Operational Water and Wastewater Consumption

5.12.1. Unmitigated

Land Use	Indoor Water (gal/year)	Outdoor Water (gal/year)
Apartments Low Rise	1,080,940	0.00
Condo/Townhouse	10,548,485	2,184,126
Enclosed Parking Structure	0.00	0.00
Parking Lot	0.00	0.00

5.13. Operational Waste Generation

5.13.1. Unmitigated

Land Use	Waste (ton/year)	Cogeneration (kWh/year)
Apartments Low Rise	25.0	—
Condo/Townhouse	243	—
Enclosed Parking Structure	0.00	—
Parking Lot	0.00	—

5.14. Operational Refrigeration and Air Conditioning Equipment

5.14.1. Unmitigated

Land Use Type	Equipment Type	Refrigerant	GWP	Quantity (kg)	Operations Leak Rate	Service Leak Rate	Times Serviced
Apartments Low Rise	Average room A/C & Other residential A/C and heat pumps	R-410A	2,088	< 0.005	2.50	2.50	10.0
Apartments Low Rise	Household refrigerators and/or freezers	R-134a	1,430	0.12	0.60	0.00	1.00
Condo/Townhouse	Average room A/C & Other residential A/C and heat pumps	R-410A	2,088	< 0.005	2.50	2.50	10.0
Condo/Townhouse	Household refrigerators and/or freezers	R-134a	1,430	0.12	0.60	0.00	1.00

5.15. Operational Off-Road Equipment

5.15.1. Unmitigated

Equipment Type	Fuel Type	Engine Tier	Number per Day	Hours Per Day	Horsepower	Load Factor

5.16. Stationary Sources

5.16.1. Emergency Generators and Fire Pumps

Equipment Type	Fuel Type	Number per Day	Hours per Day	Hours per Year	Horsepower	Load Factor

5.16.2. Process Boilers

Equipment Type	Fuel Type	Number	Boiler Rating (MMBtu/hr)	Daily Heat Input (MMBtu/day)	Annual Heat Input (MMBtu/yr)

5.17. User Defined

Equipment Type	Fuel Type

5.18. Vegetation

5.18.1. Land Use Change

5.18.1.1. Unmitigated

Vegetation Land Use Type	Vegetation Soil Type	Initial Acres	Final Acres

5.18.1. Biomass Cover Type

5.18.1.1. Unmitigated

Biomass Cover Type	Initial Acres	Final Acres

5.18.2. Sequestration

5.18.2.1. Unmitigated

Tree Type	Number	Electricity Saved (kWh/year)	Natural Gas Saved (btu/year)
Olive	10.0	21,352	106
Chinese Pistache	10.0	9,051	29.0
Sycamore	10.0	23,722	-167
Quercus Acutifolia	10.0	6,925	-546
Coastal Live Oak	10.0	9,916	-316
Chinese Elm	10.0	19,339	-140
Fern Tree	5.00	13,971	-67.0
Tristania	5.00	12,671	-75.0
Ulmus	5.00	7,463	24.0
Strawberry Tree	5.00	9,912	49.0
Magnolia	5.00	9,049	-86.0
Tristania	5.00	941	-280

Wilga	5.00	-268	-82.0
Guava Crape Myrtle	5.00	28,861	-45.0
Date Palm	5.00	3,268	-29.0
Bay	5.00	14,606	-39.0
African Sumac	5.00	5,915	-98.0

6. Climate Risk Detailed Report

6.1. Climate Risk Summary

Cal-Adapt midcentury 2040–2059 average projections for four hazards are reported below for your project location. These are under Representation Concentration Pathway (RCP) 8.5 which assumes GHG emissions will continue to rise strongly through 2050 and then plateau around 2100.

Climate Hazard	Result for Project Location	Unit
Temperature and Extreme Heat	5.08	annual days of extreme heat
Extreme Precipitation	4.20	annual days with precipitation above 20 mm
Sea Level Rise	—	meters of inundation depth
Wildfire	0.00	annual hectares burned

Temperature and Extreme Heat data are for grid cell in which your project are located. The projection is based on the 98th historical percentile of daily maximum/minimum temperatures from observed historical data (32 climate model ensemble from Cal-Adapt, 2040–2059 average under RCP 8.5). Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.
Extreme Precipitation data are for the grid cell in which your project are located. The threshold of 20 mm is equivalent to about ¾ an inch of rain, which would be light to moderate rainfall if received over a full day or heavy rain if received over a period of 2 to 4 hours. Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.
Sea Level Rise data are for the grid cell in which your project are located. The projections are from Radke et al. (2017), as reported in Cal-Adapt (Radke et al., 2017, CEC-500-2017-008), and consider inundation location and depth for the San Francisco Bay, the Sacramento-San Joaquin River Delta and California coast resulting different increments of sea level rise coupled with extreme storm events. Users may select from four scenarios to view the range in potential inundation depth for the grid cell. The four scenarios are: No rise, 0.5 meter, 1.0 meter, 1.41 meters
Wildfire data are for the grid cell in which your project are located. The projections are from UC Davis, as reported in Cal-Adapt (2040–2059 average under RCP 8.5), and consider historical data of climate, vegetation, population density, and large (> 400 ha) fire history. Users may select from four model simulations to view the range in potential wildfire probabilities for the grid cell. The four simulations make different assumptions about expected rainfall and temperature are: Warmer/drier (HadGEM2-ES), Cooler/wetter (CNRM-CM5), Average conditions (CanESM2), Range of different rainfall and temperature possibilities (MIROC5). Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.

6.2. Initial Climate Risk Scores

Climate Hazard	Exposure Score	Sensitivity Score	Adaptive Capacity Score	Vulnerability Score
Temperature and Extreme Heat	1	0	0	N/A
Extreme Precipitation	N/A	N/A	N/A	N/A

Sea Level Rise	1	0	0	N/A
Wildfire	1	0	0	N/A
Flooding	N/A	N/A	N/A	N/A
Drought	N/A	N/A	N/A	N/A
Snowpack Reduction	N/A	N/A	N/A	N/A
Air Quality Degradation	0	0	0	N/A

The sensitivity score reflects the extent to which a project would be adversely affected by exposure to a climate hazard. Exposure is rated on a scale of 1 to 5, with a score of 5 representing the greatest exposure.
The adaptive capacity of a project refers to its ability to manage and reduce vulnerabilities from projected climate hazards. Adaptive capacity is rated on a scale of 1 to 5, with a score of 5 representing the greatest ability to adapt.
The overall vulnerability scores are calculated based on the potential impacts and adaptive capacity assessments for each hazard. Scores do not include implementation of climate risk reduction measures.

6.3. Adjusted Climate Risk Scores

Climate Hazard	Exposure Score	Sensitivity Score	Adaptive Capacity Score	Vulnerability Score
Temperature and Extreme Heat	1	1	1	2
Extreme Precipitation	N/A	N/A	N/A	N/A
Sea Level Rise	1	1	1	2
Wildfire	1	1	1	2
Flooding	N/A	N/A	N/A	N/A
Drought	N/A	N/A	N/A	N/A
Snowpack Reduction	N/A	N/A	N/A	N/A
Air Quality Degradation	1	1	1	2

The sensitivity score reflects the extent to which a project would be adversely affected by exposure to a climate hazard. Exposure is rated on a scale of 1 to 5, with a score of 5 representing the greatest exposure.
The adaptive capacity of a project refers to its ability to manage and reduce vulnerabilities from projected climate hazards. Adaptive capacity is rated on a scale of 1 to 5, with a score of 5 representing the greatest ability to adapt.
The overall vulnerability scores are calculated based on the potential impacts and adaptive capacity assessments for each hazard. Scores include implementation of climate risk reduction measures.

6.4. Climate Risk Reduction Measures

7. Health and Equity Details

7.1. CalEnviroScreen 4.0 Scores

The maximum CalEnviroScreen score is 100. A high score (i.e., greater than 50) reflects a higher pollution burden compared to other census tracts in the state.

Indicator	Result for Project Census Tract
Exposure Indicators	—
AQ-Ozone	22.2
AQ-PM	80.6
AQ-DPM	86.0
Drinking Water	29.4
Lead Risk Housing	59.8
Pesticides	0.00
Toxic Releases	98.8
Traffic	95.4
Effect Indicators	—
CleanUp Sites	89.2
Groundwater	94.0
Haz Waste Facilities/Generators	67.0
Impaired Water Bodies	93.4
Solid Waste	54.8
Sensitive Population	—
Asthma	76.6
Cardio-vascular	82.7
Low Birth Weights	74.9
Socioeconomic Factor Indicators	—
Education	62.2
Housing	28.2
Linguistic	77.1

Poverty	49.7
Unemployment	43.1

7.2. Healthy Places Index Scores

The maximum Health Places Index score is 100. A high score (i.e., greater than 50) reflects healthier community conditions compared to other census tracts in the state.

Indicator	Result for Project Census Tract
Economic	—
Above Poverty	57.92377775
Employed	62.37649172
Median HI	55.88348518
Education	—
Bachelor's or higher	53.18875914
High school enrollment	100
Preschool enrollment	48.45374054
Transportation	—
Auto Access	31.27165405
Active commuting	35.41639933
Social	—
2-parent households	72.60361863
Voting	9.29038881
Neighborhood	—
Alcohol availability	51.72590787
Park access	27.21673297
Retail density	43.47491338
Supermarket access	40.56204286
Tree canopy	50.87899397
Housing	—
Homeownership	92.2751187

Housing habitability	75.06736815
Low-inc homeowner severe housing cost burden	74.6439112
Low-inc renter severe housing cost burden	51.52059541
Uncrowded housing	28.33311947
Health Outcomes	—
Insured adults	43.11561658
Arthritis	59.3
Asthma ER Admissions	30.5
High Blood Pressure	37.6
Cancer (excluding skin)	49.7
Asthma	94.4
Coronary Heart Disease	54.4
Chronic Obstructive Pulmonary Disease	74.0
Diagnosed Diabetes	25.3
Life Expectancy at Birth	63.6
Cognitively Disabled	50.3
Physically Disabled	14.3
Heart Attack ER Admissions	25.8
Mental Health Not Good	69.9
Chronic Kidney Disease	45.1
Obesity	76.5
Pedestrian Injuries	19.6
Physical Health Not Good	51.8
Stroke	51.7
Health Risk Behaviors	—
Binge Drinking	89.1
Current Smoker	71.8
No Leisure Time for Physical Activity	41.3

Climate Change Exposures	—
Wildfire Risk	0.0
SLR Inundation Area	0.0
Children	68.4
Elderly	14.5
English Speaking	25.4
Foreign-born	90.0
Outdoor Workers	75.3
Climate Change Adaptive Capacity	—
Impervious Surface Cover	11.0
Traffic Density	92.2
Traffic Access	61.6
Other Indices	—
Hardship	56.0
Other Decision Support	—
2016 Voting	18.3

7.3. Overall Health & Equity Scores

Metric	Result for Project Census Tract
CalEnviroScreen 4.0 Score for Project Location (a)	92.0
Healthy Places Index Score for Project Location (b)	51.0
Project Located in a Designated Disadvantaged Community (Senate Bill 535)	Yes
Project Located in a Low-Income Community (Assembly Bill 1550)	Yes
Project Located in a Community Air Protection Program Community (Assembly Bill 617)	Wilmington Long Beach Carson

a: The maximum CalEnviroScreen score is 100. A high score (i.e., greater than 50) reflects a higher pollution burden compared to other census tracts in the state.
b: The maximum Health Places Index score is 100. A high score (i.e., greater than 50) reflects healthier community conditions compared to other census tracts in the state.

7.4. Health & Equity Measures

No Health & Equity Measures selected.

7.5. Evaluation Scorecard

Health & Equity Evaluation Scorecard not completed.

7.6. Health & Equity Custom Measures

No Health & Equity Custom Measures created.

8. User Changes to Default Data

Screen	Justification
Characteristics: Project Details	—
Land Use	Population assumes 3.43 persons per unit per SCAG 2020-2045 RTP/SCS demographic information for City of Carson in 2045.
Construction: Construction Phases	Developer information
Construction: Off-Road Equipment	—
Construction: Trips and VMT	—
Operations: Hearths	Project plans



DouglasKim+Associates,LLC

TREE SEQUESTRATION CALCULATIONS

Project Report - i-Tree Planting Calculator

Location: Carson, California 90745
Total number of trees planted in this project: 117
Electricity Emissions Factor: 252.40 kilograms CO2 equivalent/MWh
Fuel Emissions Factor: 52.00 kilograms CO2 equivalent/MMBtu
Lifetime: 40 years
Annual Tree Mortality: 3%

All amounts in the tables are for the full lifetime of the project.

Location			Tree Growth					
Group Identifier	Tree Group Characteristics	Initial Number of Trees	DBH (The estimated DBH at the end of the projection) ()	Height (The estimated tree height at the end of the projection) ()	Surviving Trees (The number of trees that survive at the end of the projection based on the mortality rate. The models do estimate fractions of individual trees remaining after mortality for the most precise estimates of the benefits.)	Basal Area (The estimated combined basal area of surviving trees at the end of the projection.) ()	Canopy Cover (The estimated combined crown area of surviving trees at the end of the projection. This combined crown area estimate assumes no overlap between tree crowns and represents the maximum area that these trees could possibly cover.) ()	Biomass (The estimated combined biomass of surviving trees at the end of the projection.) (pounds)
1	• 10 Olive spp(Olea) trees of 2 inches initial DBH (Diameter at Breast Height). • Planted 0-19 feet and north (0°) of buildings that were built post-1980 with heating and cooling. • Trees are in excellent condition and planted in full sun.	10	18.5	68.0	3.0	5.7	1,167.2	4.9
2	• 10 Chinese pistache(Pistacia chinensis) trees of 2 inches initial DBH (Diameter at Breast Height). • Planted 0-19 feet and north (0°) of buildings that were built post-1980 with heating and cooling. • Trees are in excellent condition and planted in full sun.	10	30.6	60.5	3.0	15.5	4,294.6	14.7
3	• 10 Sycamore spp(Platanus) trees of 2 inches initial DBH (Diameter at Breast Height). • Planted 0-19 feet and south (180°) of buildings that were built post-1980 with heating and cooling. • Trees are in excellent condition and planted in full sun.	10	32.7	81.8	3.0	17.8	5,769.9	9.3
4	• 10 Quercus acutifolia(Quercus acutifolia) trees of 2 inches initial DBH (Diameter at Breast Height). • Planted 0-19 feet and south (180°) of buildings that were built post-1980 with heating and cooling. • Trees are in excellent condition and planted in full sun.	10	18.7	70.9	3.0	5.8	2,454.9	4.9

Location			Tree Growth					
Group Identifier	Tree Group Characteristics	Initial Number of Trees	DBH (The estimated DBH at the end of the projection) ()	Height (The estimated tree height at the end of the projection) ()	Surviving Trees (The number of trees that survive at the end of the projection based on the mortality rate. The models do estimate fractions of individual trees remaining after mortality for the most precise estimates of the benefits.)	Basal Area (The estimated combined basal area of surviving trees at the end of the projection.) ()	Canopy Cover (The estimated combined crown area of surviving trees at the end of the projection. This combined crown area estimate assumes no overlap between tree crowns and represents the maximum area that these trees could possibly cover.) ()	Biomass (The estimated combined biomass of surviving trees at the end of the projection.) (pounds)
5	• 10 Coastal live oak(Quercus agrifolia) trees of 2 inches initial DBH (Diameter at Breast Height). • Planted 0-19 feet and east (90°) of buildings that were built post-1980 with heating and cooling. • Trees are in excellent condition and planted in full sun.	10	23.4	78.3	3.0	9.1	3,173.7	9.3
6	• 10 Chinese elm(Ulmus parvifolia) trees of 2 inches initial DBH (Diameter at Breast Height). • Planted 0-19 feet and east (90°) of buildings that were built post-1980 with heating and cooling. • Trees are in excellent condition and planted in full sun.	10	41.3	95.1	3.0	28.4	7,073.2	34.3
7	• 5 Fern tree(Filicium decipiens) trees of 2 inches initial DBH (Diameter at Breast Height). • Planted 0-19 feet and west (270°) of buildings that were built post-1980 with heating and cooling. • Trees are in excellent condition and planted in full sun.	5	32.7	89.4	1.5	8.9	1,655.7	16.5
8	• 5 Ttristania spp(Tristania) trees of 2 inches initial DBH (Diameter at Breast Height). • Planted 0-19 feet and west (270°) of buildings that were built post-1980 with heating and cooling. • Trees are in excellent condition and planted in full sun.	5	30.6	69.8	1.5	7.8	1,323.1	14.5

Location			Tree Growth					
Group Identifier	Tree Group Characteristics	Initial Number of Trees	DBH (The estimated DBH at the end of the projection) ()	Height (The estimated tree height at the end of the projection) ()	Surviving Trees (The number of trees that survive at the end of the projection based on the mortality rate. The models do estimate fractions of individual trees remaining after mortality for the most precise estimates of the benefits.)	Basal Area (The estimated combined basal area of surviving trees at the end of the projection.) ()	Canopy Cover (The estimated combined crown area of surviving trees at the end of the projection. This combined crown area estimate assumes no overlap between tree crowns and represents the maximum area that these trees could possibly cover.) ()	Biomass (The estimated combined biomass of surviving trees at the end of the projection.) (pounds)
9	• 5 Ulmus x notha(Ulmus x notha) trees of 2 inches initial DBH (Diameter at Breast Height). • Planted 0-19 feet and north (0°) of buildings that were built post-1980 with heating and cooling. • Trees are in excellent condition and planted in full sun.	5	41.3	95.1	1.5	14.2	4,680.5	12.5
10	• 5 Strawberry tree(Arbutus unedo) trees of 2 inches initial DBH (Diameter at Breast Height). • Planted 0-19 feet and north (0°) of buildings that were built post-1980 with heating and cooling. • Trees are in excellent condition and planted in full sun.	5	17.6	86.5	1.5	2.6	1,013.8	2.5
11	• 5 Magnolia spp(Magnolia) trees of 2 inches initial DBH (Diameter at Breast Height). • Planted 0-19 feet and south (180°) of buildings that were built post-1980 with heating and cooling. • Trees are in excellent condition and planted in full sun.	5	30.6	54.4	1.5	7.8	2,937.6	7.6
12	• 5 Ttristania spp(Tristania) trees of 2 inches initial DBH (Diameter at Breast Height). • Planted 0-19 feet and south (180°) of buildings that were built post-1980 with heating and cooling. • Trees are in excellent condition and planted in full sun.	5	30.6	69.8	1.5	7.8	1,323.1	14.5

Location			Tree Growth					
Group Identifier	Tree Group Characteristics	Initial Number of Trees	DBH (The estimated DBH at the end of the projection) ()	Height (The estimated tree height at the end of the projection) ()	Surviving Trees (The number of trees that survive at the end of the projection based on the mortality rate. The models do estimate fractions of individual trees remaining after mortality for the most precise estimates of the benefits.)	Basal Area (The estimated combined basal area of surviving trees at the end of the projection.) ()	Canopy Cover (The estimated combined crown area of surviving trees at the end of the projection. This combined crown area estimate assumes no overlap between tree crowns and represents the maximum area that these trees could possibly cover.) ()	Biomass (The estimated combined biomass of surviving trees at the end of the projection.) (pounds)
14	• 5 Wilga; australian willow(Geijera parviflora) trees of 2 inches initial DBH (Diameter at Breast Height). • Planted 0-19 feet and east (90°) of buildings that were built post-1980 with heating and cooling. • Trees are in excellent condition and planted in full sun.	5	18.7	23.8	1.5	2.9	700.7	3.4
15	• 5 Guava crape myrtle(Lagerstroemia calyculata) trees of 2 inches initial DBH (Diameter at Breast Height). • Planted 0-19 feet and east (90°) of buildings that were built post-1980 with heating and cooling. • Trees are in excellent condition and planted in full sun.	5	32.7	31.8	1.5	8.9	1,078.7	8.5
16	• 7 Date Palm spp(Phoenix) trees of 2 inches initial DBH (Diameter at Breast Height). • Planted 0-19 feet and west (270°) of buildings that were built post-1980 with heating and cooling. • Trees are in excellent condition and planted in full sun.	7	18.5	21.5	2.1	4.0	557.2	0.3
17	• 5 Bay spp(Persea) trees of 2 inches initial DBH (Diameter at Breast Height). • Planted 0-19 feet and west (270°) of buildings that were built post-1980 with heating and cooling. • Trees are in excellent condition and planted in full sun.	5	30.6	60.8	1.5	7.8	2,334.3	9.1

Location			Tree Growth					
Group Identifier	**Tree Group Characteristics**	**Initial Number of Trees**	**DBH (The estimated DBH at the end of the projection) ()**	**Height (The estimated tree height at the end of the projection) ()**	**Surviving Trees (The number of trees that survive at the end of the projection based on the mortality rate. The models do estimate fractions of individual trees remaining after mortality for the most precise estimates of the benefits.)**	**Basal Area (The estimated combined basal area of surviving trees at the end of the projection.) ()**	**Canopy Cover (The estimated combined crown area of surviving trees at the end of the projection. This combined crown area estimate assumes no overlap between tree crowns and represents the maximum area that these trees could possibly cover.) ()**	**Biomass (The estimated combined biomass of surviving trees at the end of the projection.) (pounds)**
18	• 5 African sumac(Searsia lancea) trees of 2 inches initial DBH (Diameter at Breast Height). • Planted 0-19 feet and west (270°) of buildings that were built post-1980 with heating and cooling. • Trees are in excellent condition and planted in full sun.	5	18.5	43.1	1.5	2.8	1,008.7	2.3
Total		117			**36**	**157.6**	**42,546.9**	**169.2**

Location			CO_2 (Carbon Dioxide) Benefits			
Group Identifier	**Tree Group Characteristics**	**Initial Number of Trees**	**CO_2 (Carbon Dioxide) Avoided (pounds)**	**CO_2 Avoided ($)**	**CO_2 Sequestered (pounds)**	**CO_2 Sequestered ($)**
1	• 10 Olive spp(Olea) trees of 2 inches initial DBH (Diameter at Breast Height). • Planted 0-19 feet and north (0°) of buildings that were built post-1980 with heating and cooling. • Trees are in excellent condition and planted in full sun.	10	25,201.1	$586.10	36,199.4	$841.89
2	• 10 Chinese pistache(Pistacia chinensis) trees of 2 inches initial DBH (Diameter at Breast Height). • Planted 0-19 feet and north (0°) of buildings that were built post-1980 with heating and cooling. • Trees are in excellent condition and planted in full sun.	10	8,863.5	$206.14	86,232.0	$2,005.49
3	• 10 Sycamore spp(Platanus) trees of 2 inches initial DBH (Diameter at Breast Height). • Planted 0-19 feet and south (180°) of buildings that were built post-1980 with heating and cooling. • Trees are in excellent condition and planted in full sun.	10	-4,765.8	$-110.84	52,463.5	$1,220.14
4	• 10 Quercus acutifolia(Quercus acutifolia) trees of 2 inches initial DBH (Diameter at Breast Height). • Planted 0-19 feet and south (180°) of buildings that were built post-1980 with heating and cooling. • Trees are in excellent condition and planted in full sun.	10	-58,418.2	$-1,358.63	40,076.7	$932.06
5	• 10 Coastal live oak(Quercus agrifolia) trees of 2 inches initial DBH (Diameter at Breast Height). • Planted 0-19 feet and east (90°) of buildings that were built post-1980 with heating and cooling. • Trees are in excellent condition and planted in full sun.	10	-30,167.3	$-701.60	52,614.9	$1,223.66
6	• 10 Chinese elm(Ulmus parvifolia) trees of 2 inches initial DBH (Diameter at Breast Height). • Planted 0-19 feet and east (90°) of buildings that were built post-1980 with heating and cooling. • Trees are in excellent condition and planted in full sun.	10	-4,279.5	$-99.53	193,139.7	$4,491.84
7	• 5 Fern tree(Filicium decipiens) trees of 2 inches initial DBH (Diameter at Breast Height). • Planted 0-19 feet and west (270°) of buildings that were built post-1980 with heating and cooling. • Trees are in excellent condition and planted in full sun.	5	774.3	$18.01	92,835.2	$2,159.06
8	• 5 Ttristania spp(Tristania) trees of 2 inches initial DBH (Diameter at Breast Height). • Planted 0-19 feet and west (270°) of buildings that were built post-1980 with heating and cooling. • Trees are in excellent condition and planted in full sun.	5	-937.1	$-21.79	84,575.5	$1,966.97
9	• 5 Ulmus x notha(Ulmus x notha) trees of 2 inches initial DBH (Diameter at Breast Height). • Planted 0-19 feet and north (0°) of buildings that were built post-1980 with heating and cooling. • Trees are in excellent condition and planted in full sun.	5	7,315.3	$170.13	70,466.7	$1,638.84
10	• 5 Strawberry tree(Arbutus unedo) trees of 2 inches initial DBH (Diameter at Breast Height). • Planted 0-19 feet and north (0°) of buildings that were built post-1980 with heating and cooling. • Trees are in excellent condition and planted in full sun.	5	11,693.9	$271.96	16,226.2	$377.37
11	• 5 Magnolia spp(Magnolia) trees of 2 inches initial DBH (Diameter at Breast Height). • Planted 0-19 feet and south (180°) of buildings that were built post-1980 with heating and cooling. • Trees are in excellent condition and planted in full sun.	5	-4,406.5	$-102.48	44,087.8	$1,025.35

Location			CO_2 (Carbon Dioxide) Benefits			
Group Identifier	**Tree Group Characteristics**	**Initial Number of Trees**	**CO_2 (Carbon Dioxide) Avoided (pounds)**	**CO_2 Avoided ($)**	**CO_2 Sequestered (pounds)**	**CO_2 Sequestered ($)**
12	• 5 Ttristania spp(Tristania) trees of 2 inches initial DBH (Diameter at Breast Height). • Planted 0-19 feet and south (180°) of buildings that were built post-1980 with heating and cooling. • Trees are in excellent condition and planted in full sun.	5	-31,619.0	$-735.36	84,575.5	$1,966.97
14	• 5 Wilga; australian willow(Geijera parviflora) trees of 2 inches initial DBH (Diameter at Breast Height). • Planted 0-19 feet and east (90°) of buildings that were built post-1980 with heating and cooling. • Trees are in excellent condition and planted in full sun.	5	-9,638.1	$-224.15	27,165.7	$631.79
15	• 5 Guava crape myrtle(Lagerstroemia calyculata) trees of 2 inches initial DBH (Diameter at Breast Height). • Planted 0-19 feet and east (90°) of buildings that were built post-1980 with heating and cooling. • Trees are in excellent condition and planted in full sun.	5	-3,476.7	$-80.86	48,179.6	$1,120.51
16	• 7 Date Palm spp(Phoenix) trees of 2 inches initial DBH (Diameter at Breast Height). • Planted 0-19 feet and west (270°) of buildings that were built post-1980 with heating and cooling. • Trees are in excellent condition and planted in full sun.	7	-1,360.1	$-31.63	1,974.8	$45.93
17	• 5 Bay spp(Persea) trees of 2 inches initial DBH (Diameter at Breast Height). • Planted 0-19 feet and west (270°) of buildings that were built post-1980 with heating and cooling. • Trees are in excellent condition and planted in full sun.	5	4,384.4	$101.97	52,799.8	$1,227.96
18	• 5 African sumac(Searsia lancea) trees of 2 inches initial DBH (Diameter at Breast Height). • Planted 0-19 feet and west (270°) of buildings that were built post-1980 with heating and cooling. • Trees are in excellent condition and planted in full sun.	5	-7,670.0	$-178.38	17,438.2	$405.56
Total		117	**-98,505.9**	**$-2,290.95**	**1,001,051.2**	**$23,281.39**

Location			Energy Benefits			
Group Identifier	Tree Group Characteristics	Initial Number of Trees	Electricity Saved (kWh) (Kilowatt-Hours)	Electricity Saved ($)	Fuel Saved (MMBtu) (Millions of British Thermal Units)	Fuel Saved ($)
1	• 10 Olive spp(Olea) trees of 2 inches initial DBH (Diameter at Breast Height). • Planted 0-19 feet and north (0°) of buildings that were built post-1980 with heating and cooling. • Trees are in excellent condition and planted in full sun.	10	21,352.5	$4,370.86	106.1	$1,372.90
2	• 10 Chinese pistache(Pistacia chinensis) trees of 2 inches initial DBH (Diameter at Breast Height). • Planted 0-19 feet and north (0°) of buildings that were built post-1980 with heating and cooling. • Trees are in excellent condition and planted in full sun.	10	9,051.2	$1,852.78	29.1	$376.63
3	• 10 Sycamore spp(Platanus) trees of 2 inches initial DBH (Diameter at Breast Height). • Planted 0-19 feet and south (180°) of buildings that were built post-1980 with heating and cooling. • Trees are in excellent condition and planted in full sun.	10	23,722.1	$4,855.91	-167.9	$-2,172.83
4	• 10 Quercus acutifolia(Quercus acutifolia) trees of 2 inches initial DBH (Diameter at Breast Height). • Planted 0-19 feet and south (180°) of buildings that were built post-1980 with heating and cooling. • Trees are in excellent condition and planted in full sun.	10	6,925.8	$1,417.71	-546.5	$-7,071.08
5	• 10 Coastal live oak(Quercus agrifolia) trees of 2 inches initial DBH (Diameter at Breast Height). • Planted 0-19 feet and east (90°) of buildings that were built post-1980 with heating and cooling. • Trees are in excellent condition and planted in full sun.	10	9,916.8	$2,029.97	-316.0	$-4,088.49
6	• 10 Chinese elm(Ulmus parvifolia) trees of 2 inches initial DBH (Diameter at Breast Height). • Planted 0-19 feet and east (90°) of buildings that were built post-1980 with heating and cooling. • Trees are in excellent condition and planted in full sun.	10	19,339.1	$3,958.72	-140.3	$-1,815.88
7	• 5 Fern tree(Filicium decipiens) trees of 2 inches initial DBH (Diameter at Breast Height). • Planted 0-19 feet and west (270°) of buildings that were built post-1980 with heating and cooling. • Trees are in excellent condition and planted in full sun.	5	13,971.0	$2,859.87	-67.7	$-875.47
8	• 5 Ttristania spp(Tristania) trees of 2 inches initial DBH (Diameter at Breast Height). • Planted 0-19 feet and west (270°) of buildings that were built post-1980 with heating and cooling. • Trees are in excellent condition and planted in full sun.	5	12,671.0	$2,593.75	-75.7	$-979.05
9	• 5 Ulmus x notha(Ulmus x notha) trees of 2 inches initial DBH (Diameter at Breast Height). • Planted 0-19 feet and north (0°) of buildings that were built post-1980 with heating and cooling. • Trees are in excellent condition and planted in full sun.	5	7,463.4	$1,527.76	24.1	$311.31
10	• 5 Strawberry tree(Arbutus unedo) trees of 2 inches initial DBH (Diameter at Breast Height). • Planted 0-19 feet and north (0°) of buildings that were built post-1980 with heating and cooling. • Trees are in excellent condition and planted in full sun.	5	9,912.5	$2,029.09	49.2	$636.75
11	• 5 Magnolia spp(Magnolia) trees of 2 inches initial DBH (Diameter at Breast Height). • Planted 0-19 feet and south (180°) of buildings that were built post-1980 with heating and cooling. • Trees are in excellent condition and planted in full sun.	5	9,049.2	$1,852.37	-86.6	$-1,121.03

Location			Energy Benefits			
Group Identifier	**Tree Group Characteristics**	**Initial Number of Trees**	**Electricity Saved (kWh) (Kilowatt-Hours)**	**Electricity Saved ($)**	**Fuel Saved (MMBtu) (Millions of British Thermal Units)**	**Fuel Saved ($)**
12	• 5 Ttristania spp(Tristania) trees of 2 inches initial DBH (Diameter at Breast Height). • Planted 0-19 feet and south (180°) of buildings that were built post-1980 with heating and cooling. • Trees are in excellent condition and planted in full sun.	5	941.3	$192.69	-280.8	$-3,633.77
14	• 5 Wilga; australian willow(Geijera parviflora) trees of 2 inches initial DBH (Diameter at Breast Height). • Planted 0-19 feet and east (90°) of buildings that were built post-1980 with heating and cooling. • Trees are in excellent condition and planted in full sun.	5	-268.4	$-54.95	-82.6	$-1,069.37
15	• 5 Guava crape myrtle(Lagerstroemia calyculata) trees of 2 inches initial DBH (Diameter at Breast Height). • Planted 0-19 feet and east (90°) of buildings that were built post-1980 with heating and cooling. • Trees are in excellent condition and planted in full sun.	5	2,861.9	$585.82	-45.6	$-589.66
16	• 7 Date Palm spp(Phoenix) trees of 2 inches initial DBH (Diameter at Breast Height). • Planted 0-19 feet and west (270°) of buildings that were built post-1980 with heating and cooling. • Trees are in excellent condition and planted in full sun.	7	3,268.9	$669.14	-29.3	$-378.81
17	• 5 Bay spp(Persea) trees of 2 inches initial DBH (Diameter at Breast Height). • Planted 0-19 feet and west (270°) of buildings that were built post-1980 with heating and cooling. • Trees are in excellent condition and planted in full sun.	5	14,606.1	$2,989.87	-39.6	$-511.77
18	• 5 African sumac(Searsia lancea) trees of 2 inches initial DBH (Diameter at Breast Height). • Planted 0-19 feet and west (270°) of buildings that were built post-1980 with heating and cooling. • Trees are in excellent condition and planted in full sun.	5	5,915.4	$1,210.88	-98.4	$-1,273.41
Total		117	**170,699.7**	**$34,942.23**	**-1,768.4**	**$-22,883.03**

Location			Hydrological Benefits				
Group Identifier	Tree Group Characteristics	Initial Number of Trees	Rainfall Interception (gallons)	Evaporation (gallons)	Transpiration (gallons)	Runoff Avoided (gallons)	Runoff Avoided ($)
1	• 10 Olive spp(Olea) trees of 2 inches initial DBH (Diameter at Breast Height). • Planted 0-19 feet and north (0°) of buildings that were built post-1980 with heating and cooling. • Trees are in excellent condition and planted in full sun.	10	54,732.4	54,732.3	296,307.0	20,576.4	$183.87
2	• 10 Chinese pistache(Pistacia chinensis) trees of 2 inches initial DBH (Diameter at Breast Height). • Planted 0-19 feet and north (0°) of buildings that were built post-1980 with heating and cooling. • Trees are in excellent condition and planted in full sun.	10	112,077.6	112,077.3	606,758.6	42,135.0	$376.52
3	• 10 Sycamore spp(Platanus) trees of 2 inches initial DBH (Diameter at Breast Height). • Planted 0-19 feet and south (180°) of buildings that were built post-1980 with heating and cooling. • Trees are in excellent condition and planted in full sun.	10	133,270.0	133,269.6	721,488.4	50,102.2	$447.71
4	• 10 Quercus acutifolia(Quercus acutifolia) trees of 2 inches initial DBH (Diameter at Breast Height). • Planted 0-19 feet and south (180°) of buildings that were built post-1980 with heating and cooling. • Trees are in excellent condition and planted in full sun.	10	109,171.6	109,171.4	591,026.5	41,042.5	$366.76
5	• 10 Coastal live oak(Quercus agrifolia) trees of 2 inches initial DBH (Diameter at Breast Height). • Planted 0-19 feet and east (90°) of buildings that were built post-1980 with heating and cooling. • Trees are in excellent condition and planted in full sun.	10	86,164.0	86,163.7	466,469.0	32,392.9	$289.46
6	• 10 Chinese elm(Ulmus parvifolia) trees of 2 inches initial DBH (Diameter at Breast Height). • Planted 0-19 feet and east (90°) of buildings that were built post-1980 with heating and cooling. • Trees are in excellent condition and planted in full sun.	10	164,642.0	164,641.6	891,328.2	61,896.3	$553.11
7	• 5 Fern tree(Filicium decipiens) trees of 2 inches initial DBH (Diameter at Breast Height). • Planted 0-19 feet and west (270°) of buildings that were built post-1980 with heating and cooling. • Trees are in excellent condition and planted in full sun.	5	43,887.8	43,887.7	237,596.8	16,499.4	$147.44
8	• 5 Ttristania spp(Tristania) trees of 2 inches initial DBH (Diameter at Breast Height). • Planted 0-19 feet and west (270°) of buildings that were built post-1980 with heating and cooling. • Trees are in excellent condition and planted in full sun.	5	39,598.8	39,598.7	214,377.3	14,887.0	$133.03
9	• 5 Ulmus x notha(Ulmus x notha) trees of 2 inches initial DBH (Diameter at Breast Height). • Planted 0-19 feet and north (0°) of buildings that were built post-1980 with heating and cooling. • Trees are in excellent condition and planted in full sun.	5	101,443.5	101,443.2	549,188.3	38,137.2	$340.79
10	• 5 Strawberry tree(Arbutus unedo) trees of 2 inches initial DBH (Diameter at Breast Height). • Planted 0-19 feet and north (0°) of buildings that were built post-1980 with heating and cooling. • Trees are in excellent condition and planted in full sun.	5	38,318.7	38,318.6	207,447.5	14,405.7	$128.73
11	• 5 Magnolia spp(Magnolia) trees of 2 inches initial DBH (Diameter at Breast Height). • Planted 0-19 feet and south (180°) of buildings that were built post-1980 with heating and cooling. • Trees are in excellent condition and planted in full sun.	5	71,006.5	71,006.3	384,410.5	26,694.5	$238.54

Location			Hydrological Benefits				
Group Identifier	**Tree Group Characteristics**	**Initial Number of Trees**	**Rainfall Interception (gallons)**	**Evaporation (gallons)**	**Transpiration (gallons)**	**Runoff Avoided (gallons)**	**Runoff Avoided ($)**
12	• 5 Ttristania spp(Tristania) trees of 2 inches initial DBH (Diameter at Breast Height). • Planted 0-19 feet and south (180°) of buildings that were built post-1980 with heating and cooling. • Trees are in excellent condition and planted in full sun.	5	39,598.8	39,598.7	214,377.3	14,887.0	$133.03
14	• 5 Wilga; australian willow(Geijera parviflora) trees of 2 inches initial DBH (Diameter at Breast Height). • Planted 0-19 feet and east (90°) of buildings that were built post-1980 with heating and cooling. • Trees are in excellent condition and planted in full sun.	5	33,326.5	33,326.4	180,420.7	12,528.9	$111.96
15	• 5 Guava crape myrtle(Lagerstroemia calyculata) trees of 2 inches initial DBH (Diameter at Breast Height). • Planted 0-19 feet and east (90°) of buildings that were built post-1980 with heating and cooling. • Trees are in excellent condition and planted in full sun.	5	29,030.8	29,030.8	157,165.3	10,914.0	$97.53
16	• 7 Date Palm spp(Phoenix) trees of 2 inches initial DBH (Diameter at Breast Height). • Planted 0-19 feet and west (270°) of buildings that were built post-1980 with heating and cooling. • Trees are in excellent condition and planted in full sun.	7	22,762.7	22,762.6	123,231.0	8,557.5	$76.47
17	• 5 Bay spp(Persea) trees of 2 inches initial DBH (Diameter at Breast Height). • Planted 0-19 feet and west (270°) of buildings that were built post-1980 with heating and cooling. • Trees are in excellent condition and planted in full sun.	5	61,649.3	61,649.2	333,753.1	23,176.8	$207.11
18	• 5 African sumac(Searsia lancea) trees of 2 inches initial DBH (Diameter at Breast Height). • Planted 0-19 feet and west (270°) of buildings that were built post-1980 with heating and cooling. • Trees are in excellent condition and planted in full sun.	5	41,750.8	41,750.7	226,027.6	15,696.0	$140.26
Total		117	**1,182,431.7**	**1,182,428.7**	**6,401,373.0**	**444,529.3**	**$3,972.31**

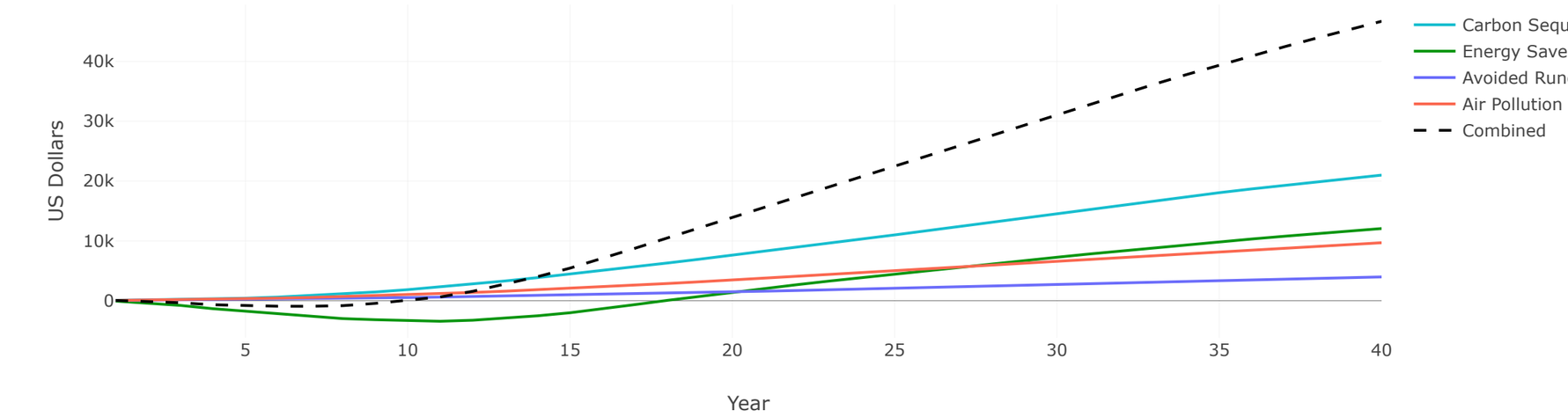
Location			Air Benefits										
Group Identifier	Tree Group Characteristics	Initial Number of Trees	O_3 (Ozone) Removed (pounds)	NO_2 (Nitrogen Dioxide) Avoided (pounds)	NO_2 (Nitrogen Dioxide) Removed (pounds)	SO_2 (Sulfur Dioxide) Avoided (pounds)	SO_2 (Sulfur Dioxide) Removed (pounds)	VOC (Volatile Organic Compound) Avoided (pounds)	$PM_{2.5}$ (Particulate matter smaller than 2.5 micrometers in diameter) Avoided (pounds)	$PM_{2.5}$ (Particulate matter smaller than 2.5 micrometers in diameter) Removed (pounds)	Avoided Value (Values for avoided pollutants) ($)	Removal Value (Values for removed pollutants) ($)
1	• 10 Olive spp(Olea) trees of 2 inches initial DBH (Diameter at Breast Height). • Planted 0-19 feet and north (0°) of buildings that were built post-1980 with heating and cooling. • Trees are in excellent condition and planted in full sun.	10	82.15	1.81	21.12	6.38	1.43	11.27	7.04	1.15	$47.47	$575.81
2	• 10 Chinese pistache(Pistacia chinensis) trees of 2 inches initial DBH (Diameter at Breast Height). • Planted 0-19 feet and north (0°) of buildings that were built post-1980 with heating and cooling. • Trees are in excellent condition and planted in full sun.	10	123.09	0.64	27.39	2.24	2.00	4.69	2.97	0.88	$19.42	$695.45
3	• 10 Sycamore spp(Platanus) trees of 2 inches initial DBH (Diameter at Breast Height). • Planted 0-19 feet and south (180°) of buildings that were built post-1980 with heating and cooling. • Trees are in excellent condition and planted in full sun.	10	187.98	-0.34	44.58	-1.20	2.97	10.98	7.47	2.15	$40.10	$1,190.00
4	• 10 Quercus acutifolia(Quercus acutifolia) trees of 2 inches initial DBH (Diameter at Breast Height). • Planted 0-19 feet and south (180°) of buildings that were built post-1980 with heating and cooling. • Trees are in excellent condition and planted in full sun.	10	160.97	-4.20	41.09	-14.78	2.80	0.52	1.58	2.10	$-10.30	$1,101.24

Location			Air Benefits										
Group Identifier	Tree Group Characteristics	Initial Number of Trees	O_3 (Ozone) Removed (pounds)	NO_2 (Nitrogen Dioxide) Avoided (pounds)	NO_2 (Nitrogen Dioxide) Removed (pounds)	SO_2 (Sulfur Dioxide) Avoided (pounds)	SO_2 (Sulfur Dioxide) Removed (pounds)	VOC (Volatile Organic Compound) Avoided (pounds)	$PM_{2.5}$ (Particulate matter smaller than 2.5 micrometers in diameter) Avoided (pounds)	$PM_{2.5}$ (Particulate matter smaller than 2.5 micrometers in diameter) Removed (pounds)	Avoided Value (Values for avoided pollutants) ($)	Removal Value (Values for removed pollutants) ($)
5	• 10 Coastal live oak(Quercus agrifolia) trees of 2 inches initial DBH (Diameter at Breast Height). • Planted 0-19 feet and east (90°) of buildings that were built post-1980 with heating and cooling. • Trees are in excellent condition and planted in full sun.	10	126.87	-2.17	32.41	-7.63	2.21	3.26	2.82	1.68	$5.89	$872.67
6	• 10 Chinese elm(Ulmus parvifolia) trees of 2 inches initial DBH (Diameter at Breast Height). • Planted 0-19 feet and east (90°) of buildings that were built post-1980 with heating and cooling. • Trees are in excellent condition and planted in full sun.	10	188.79	-0.31	42.54	-1.08	3.05	8.93	6.09	1.51	$32.54	$1,091.84
7	• 5 Fern tree(Filicium decipiens) trees of 2 inches initial DBH (Diameter at Breast Height). • Planted 0-19 feet and west (270°) of buildings that were built post-1980 with heating and cooling. • Trees are in excellent condition and planted in full sun.	5	66.57	0.06	17.12	0.20	1.16	6.63	4.44	0.92	$25.00	$464.47
8	• 5 Ttristania spp(Tristania) trees of 2 inches initial DBH (Diameter at Breast Height). • Planted 0-19 feet and west (270°) of buildings that were built post-1980 with heating and cooling. • Trees are in excellent condition and planted in full sun.	5	62.10	-0.07	16.19	-0.24	1.07	5.94	4.01	0.97	$22.04	$453.58

Location			Air Benefits										
Group Identifier	Tree Group Characteristics	Initial Number of Trees	O_3 (Ozone) Removed (pounds)	NO_2 (Nitrogen Dioxide) Avoided (pounds)	NO_2 (Nitrogen Dioxide) Removed (pounds)	SO_2 (Sulfur Dioxide) Avoided (pounds)	SO_2 (Sulfur Dioxide) Removed (pounds)	VOC (Volatile Organic Compound) Avoided (pounds)	$PM_{2.5}$ (Particulate matter smaller than 2.5 micrometers in diameter) Avoided (pounds)	$PM_{2.5}$ (Particulate matter smaller than 2.5 micrometers in diameter) Removed (pounds)	Avoided Value (Values for avoided pollutants) ($)	Removal Value (Values for removed pollutants) ($)
9	• 5 Ulmus x notha(Ulmus x notha) trees of 2 inches initial DBH (Diameter at Breast Height). • Planted 0-19 feet and north (0°) of buildings that were built post-1980 with heating and cooling. • Trees are in excellent condition and planted in full sun.	5	104.87	0.53	23.15	1.85	1.71	3.87	2.45	0.74	$16.02	$591.29
10	• 5 Strawberry tree(Arbutus unedo) trees of 2 inches initial DBH (Diameter at Breast Height). • Planted 0-19 feet and north (0°) of buildings that were built post-1980 with heating and cooling. • Trees are in excellent condition and planted in full sun.	5	44.37	0.84	10.63	2.96	0.79	5.23	3.27	0.37	$22.04	$265.98
11	• 5 Magnolia spp(Magnolia) trees of 2 inches initial DBH (Diameter at Breast Height). • Planted 0-19 feet and south (180°) of buildings that were built post-1980 with heating and cooling. • Trees are in excellent condition and planted in full sun.	5	83.55	-0.32	18.92	-1.11	1.35	4.06	2.82	0.68	$14.30	$485.20
12	• 5 Ttristania spp(Tristania) trees of 2 inches initial DBH (Diameter at Breast Height). • Planted 0-19 feet and south (180°) of buildings that were built post-1980 with heating and cooling. • Trees are in excellent condition and planted in full sun.	5	62.10	-2.27	16.19	-8.00	1.07	-1.04	-0.04	0.97	$-10.54	$453.58

Location			Air Benefits										
Group Identifier	Tree Group Characteristics	Initial Number of Trees	O_3 (Ozone) Removed (pounds)	NO_2 (Nitrogen Dioxide) Avoided (pounds)	NO_2 (Nitrogen Dioxide) Removed (pounds)	SO_2 (Sulfur Dioxide) Avoided (pounds)	SO_2 (Sulfur Dioxide) Removed (pounds)	VOC (Volatile Organic Compound) Avoided (pounds)	$PM_{2.5}$ (Particulate matter smaller than 2.5 micrometers in diameter) Avoided (pounds)	$PM_{2.5}$ (Particulate matter smaller than 2.5 micrometers in diameter) Removed (pounds)	Avoided Value (Values for avoided pollutants) ($)	Removal Value (Values for removed pollutants) ($)
14	• 5 Wilga; australian willow(Geijera parviflora) trees of 2 inches initial DBH (Diameter at Breast Height). • Planted 0-19 feet and east (90°) of buildings that were built post-1980 with heating and cooling. • Trees are in excellent condition and planted in full sun.	5	39.91	-0.69	9.65	-2.44	0.71	-0.58	-0.19	0.35	$-4.19	$243.05
15	• 5 Guava crape myrtle(Lagerstroemia calyculata) trees of 2 inches initial DBH (Diameter at Breast Height). • Planted 0-19 feet and east (90°) of buildings that were built post-1980 with heating and cooling. • Trees are in excellent condition and planted in full sun.	5	32.86	-0.25	7.37	-0.88	0.53	1.19	0.87	0.25	$3.72	$187.71
16	• 7 Date Palm spp(Phoenix) trees of 2 inches initial DBH (Diameter at Breast Height). • Planted 0-19 feet and west (270°) of buildings that were built post-1980 with heating and cooling. • Trees are in excellent condition and planted in full sun.	7	17.86	-0.10	3.87	-0.34	0.33	1.48	1.02	0.07	$5.25	$93.25
17	• 5 Bay spp(Persea) trees of 2 inches initial DBH (Diameter at Breast Height). • Planted 0-19 feet and west (270°) of buildings that were built post-1980 with heating and cooling. • Trees are in excellent condition and planted in full sun.	5	74.21	0.32	16.89	1.11	1.19	7.10	4.68	0.63	$27.51	$434.57

Location			Air Benefits										
Group Identifier	**Tree Group Characteristics**	**Initial Number of Trees**	**O_3 (Ozone) Removed (pounds)**	**NO_2 (Nitrogen Dioxide) Avoided (pounds)**	**NO_2 (Nitrogen Dioxide) Removed (pounds)**	**SO_2 (Sulfur Dioxide) Avoided (pounds)**	**SO_2 (Sulfur Dioxide) Removed (pounds)**	**VOC (Volatile Organic Compound) Avoided (pounds)**	**$PM_{2.5}$ (Particulate matter smaller than 2.5 micrometers in diameter) Avoided (pounds)**	**$PM_{2.5}$ (Particulate matter smaller than 2.5 micrometers in diameter) Removed (pounds)**	**Avoided Value (Values for avoided pollutants) ($)**	**Removal Value (Values for removed pollutants) ($)**
18	• 5 African sumac(Searsia lancea) trees of 2 inches initial DBH (Diameter at Breast Height). • Planted 0-19 feet and west (270°) of buildings that were built post-1980 with heating and cooling. • Trees are in excellent condition and planted in full sun.	5	39.97	-0.55	9.12	-1.94	0.73	2.43	1.79	0.23	$7.50	$222.01
Total		117	**1,498.21**	**-7.07**	**358.23**	**-24.89**	**25.11**	**75.95**	**53.10**	**15.65**	**$263.75**	**$9,421.68**



Mortality is modeled as a fractional (not whole) tree estimate and may not align year-over-year.
Sequestration does not account for net differences like decay.
Tree canopy cover estimate assumes no overlap between crowns.

Application v2.7.0, powered by engine v0.15.1 (APIv3) and database v12.0.77.

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Version 2.7.0

ATTACHMENT C
NOISE REPORT

NOISE TECHNICAL REPORT

Introduction

This technical report evaluates noise impacts from construction and operation of the Proposed Carson Triangle Project at 21212 Avalon Boulevard in the City of Carson. The analysis discusses applicable regulations and compares impacts to appropriate thresholds of significance. Noise measurements, calculation worksheets, and a map of noise receptors and measurement locations are included in the Technical Appendix to this analysis.

Fundamentals of Noise

Characteristics of Sound

Sound can be described in terms of its loudness (amplitude) and frequency (pitch). The standard unit of measurement for sound is the decibel (dB). Because the human ear is not equally sensitive to sound at all frequencies, the A-weighted scale (dBA) is used to reflect the normal hearing sensitivity range. On this scale, the range of human hearing extends from 3 to 140 dBA. Table 1 provides examples of A-weighted noise levels from common sources.

Table 1
A-Weighted Decibel Scale

Typical A-Weighted Sound Levels	Sound Level (dBA L_{eq})
Near Jet Engine	130
Rock and Roll Band	110
Jet flyover at 1,000 feet	100
Power Motor	90
Food Blender	80
Living Room Music	70
Human Voice at 3 feet	60
Residential Air Conditioner at 50 feet	50
Bird Calls	40
Quiet Living Room	30
Average Whisper	20
Rustling Leaves	10
Source: Cowan, James P., Handbook of Environmental Acoustics, 1993. These noise levels are approximations intended for general reference and informational use.	

Noise Definitions. This noise analysis discusses sound levels in terms of equivalent noise level (L_{eq}), maximum noise level (L_{max}) and the Community Noise Equivalent Level (CNEL).

- Equivalent Noise Level (L_{eq}): L_{eq} represents the average noise level on an energy basis for a specific time period. Average noise level is based on the energy content (acoustic energy) of sound. For example, the L_{eq} for one hour is the energy average noise level during that hour. L_{eq} can be thought of as a continuous noise level of a certain period equivalent in energy content to a fluctuating noise level of that same period.

- Maximum Noise Level (L_{max}): L_{max} represents the maximum instantaneous noise level measured during a given time period.

- Community Noise Equivalent Level (CNEL): CNEL is an adjusted noise measurement scale of average sound level during a 24-hour period. Due to increased noise sensitivities during evening and night hours, human reaction to sound between 7:00 P.M. and 10:00 P.M. is as if it were actually 5 dBA higher than had it occurred between 7:00 A.M. and 7:00 P.M. From 10:00 P.M. to 7:00 A.M., humans perceive sound as if it were 10 dBA higher. To account for these sensitivities, CNEL figures are obtained by adding an additional 5 dBA to evening noise levels between 7:00 P.M. and 10:00 P.M. and 10 dBA to nighttime noise levels between 10:00 P.M. and 7:00 A.M. As such, 24-hour CNEL figures are always higher than their corresponding actual 24-hour averages.

Effects of Noise. The degree to which noise can impact an environment ranges from levels that interfere with speech and sleep to levels that can cause adverse health effects. Most human response to noise is subjective. Factors that influence individual responses include the intensity, frequency, and pattern of noise; the amount of background noise present; and the nature of work or human activity exposed to intruding noise. According to the National Institute of Health (NIH), extended or repeated exposure to sounds at or above 85 dB can cause hearing loss. Sounds of 70 dBA or less, even after continuous exposure, are unlikely to cause hearing loss.[1] The World Health Organization (WHO) reports that adults should not be exposed to sudden "impulse" noise events of 140 dB or greater. For children, this limit is 120 dB.[2]

Exposure to elevated nighttime noise levels can disrupt sleep, leading to increased levels of fatigue and decreased work or school performance. For the preservation of healthy sleeping environments, the WHO recommends that continuous interior noise levels not exceed 30 dBA and that individual noise events of 45 dBA or higher be avoided.[3] Assuming a conservative exterior to interior sound reduction of 15 dBA, continuous exterior noise levels should therefore not exceed 45 dBA. Individual exterior events of 60 dBA or higher should also be limited. Some epidemiological studies have shown a weak association between long-term exposure to noise levels of 65 to 70 dBA and cardiovascular effects, including ischemic heart disease and hypertension. However, at this time, the relationship is largely inconclusive.

People with normal hearing sensitivity can recognize small changes in sound levels of approximately 3 dBA. Changes of at least 5 dBA can be readily noticeable while sound level increases of 10 dBA or greater are perceived as a doubling in loudness.[4] However, during daytime, few people are highly annoyed by noise levels below 55 dBA L_{eq}.[5]

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1 National Institute of Health, National Institute on Deafness and Other Communication, www.nidcd.nih.gov/health/noise-induced-hearing-loss.

2 World Health Organization, Guidelines for Community Noise, 1999.

3 Ibid.

4 Federal Transit Administration, Transit Noise and Vibration Impact Assessment, 2018.

5 World Health Organization, Guidelines for Community Noise, 1999.

Noise Attenuation. Noise levels decrease as the distance from noise sources to receivers increases. For each doubling of distance, noise from stationary sources can decrease by about 6 dBA over hard surfaces (e.g., reflective surfaces such as parking lots) and 7.5 dBA over soft surfaces (e.g., absorptive surfaces such as soft dirt and grass). For example, if a point source produces a noise level of 89 dBA at a reference distance of 50 feet over an asphalt surface, its noise level would be approximately 83 dBA at a distance of 100 feet, 77 dBA at 200 feet, etc. Noises generated by mobile sources such as roadways decrease by about 3 dBA over hard surfaces and 4.5 dBA over soft surfaces for each doubling of distance. It should be noted that because decibels are logarithmic units, they cannot be added or subtracted. For example, two cars each producing 60 dBA of noise would not produce a combined 120 dBA.

Noise is most audible when traveling by direct line of sight, an unobstructed visual path between noise source and receptor. Barriers that break line of sight between sources and receivers, such as walls and buildings, can greatly reduce source noise levels by allowing noise to reach receivers by diffraction only. As a result, sound barriers can generally reduce noise levels by up to 15 dBA.[6] The effectiveness of barriers can be greatly reduced when they are not high or long enough to completely break line of sight from sources to receivers.

Regulatory Framework

Noise

Federal. No federal noise standards regulate environmental noise associated with short-term construction activities or long-term operations of development projects. As such, temporary and long-term noise impacts produced by the Project would be largely regulated or evaluated by State and City of Carson standards designed to protect public well-being and health.

State. The State's 2017 General Plan Guidelines establish county and city standards for acceptable exterior noise levels based on land use. These standards are incorporated into land use planning processes to prevent or reduce noise and land use incompatibilities. Table 2 illustrates State compatibility considerations between land uses and exterior noise levels.

California Government Code Section 65302 also requires each county and city to prepare and adopt a comprehensive long-range general plan for its physical development. Section 65302(f) requires a noise element to be included in the general plan. This noise element must identify and appraise noise problems in the community, recognize State noise control guidelines, and analyze and quantify current and projected noise levels.

The State has also established noise insulation standards for new multi-family residential units, hotels, and motels that are subject to relatively high levels of noise from transportation. The noise insulation standards, collectively referred to as the California Noise Insulation Standards (Title 24, California Code of Regulations) set forth an interior standard of 45 dBA CNEL for habitable rooms.

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6 California Department of Transportation, Technical Noise Supplement to the Traffic Noise Analysis Protocol, September 2013. https://dot.ca.gov/-/media/dot-media/programs/environmental-analysis/documents/env/tens-sep2013-a11y.pdf

The standards require an acoustical analysis which indicates that dwelling units meet this interior standard where such units are proposed in areas subject to exterior noise levels greater than 60 dBA CNEL. Local jurisdictions typically enforce the California Noise Insulation Standards through the building permit application process.

Los Angeles County Airport Land Use Commission Comprehensive Land Use Plan. In Los Angeles County, the Regional Planning Commission has the responsibility for acting as the Airport Land Use Commission and for coordinating the airport planning of public agencies within the County. The Airport Land Use Commission coordinates planning for the areas surrounding public use airports. The Comprehensive Land Use Plan provides for the orderly expansion of Los Angeles County's public use airports and the areas surrounding them. It is intended to provide for the adoption of land use measures that will minimize the public's exposure to excessive noise and safety hazards. In formulating the Comprehensive Land Use Plan, the Los Angeles County Airport Land Use Commission has established provisions for safety, noise insulation, and the regulation of building height within areas adjacent to each of the public airports in the County.

City of Carson General Plan Noise Element. The City of Carson General Plan includes a Noise Element that includes policies and standards to guide the control of noise to protect residents, workers, and visitors. Its primary goal is to regulate long-term noise impacts to preserve acceptable noise environments for all types of land uses. It includes programs applicable to construction projects that call for protection of noise sensitive uses and use of best practices to minimize short-term noise impacts. However, the Noise Element contains no quantitative or other thresholds of significance for evaluating a project's noise impacts. Instead, it adopts the State's guidance on noise and land use compatibility, shown in Table 2, to help guide determination of appropriate land use and mitigation measures vis-à-vis existing or anticipated ambient noise levels.

The Noise Element includes a number of policies that are relevant for development projects:

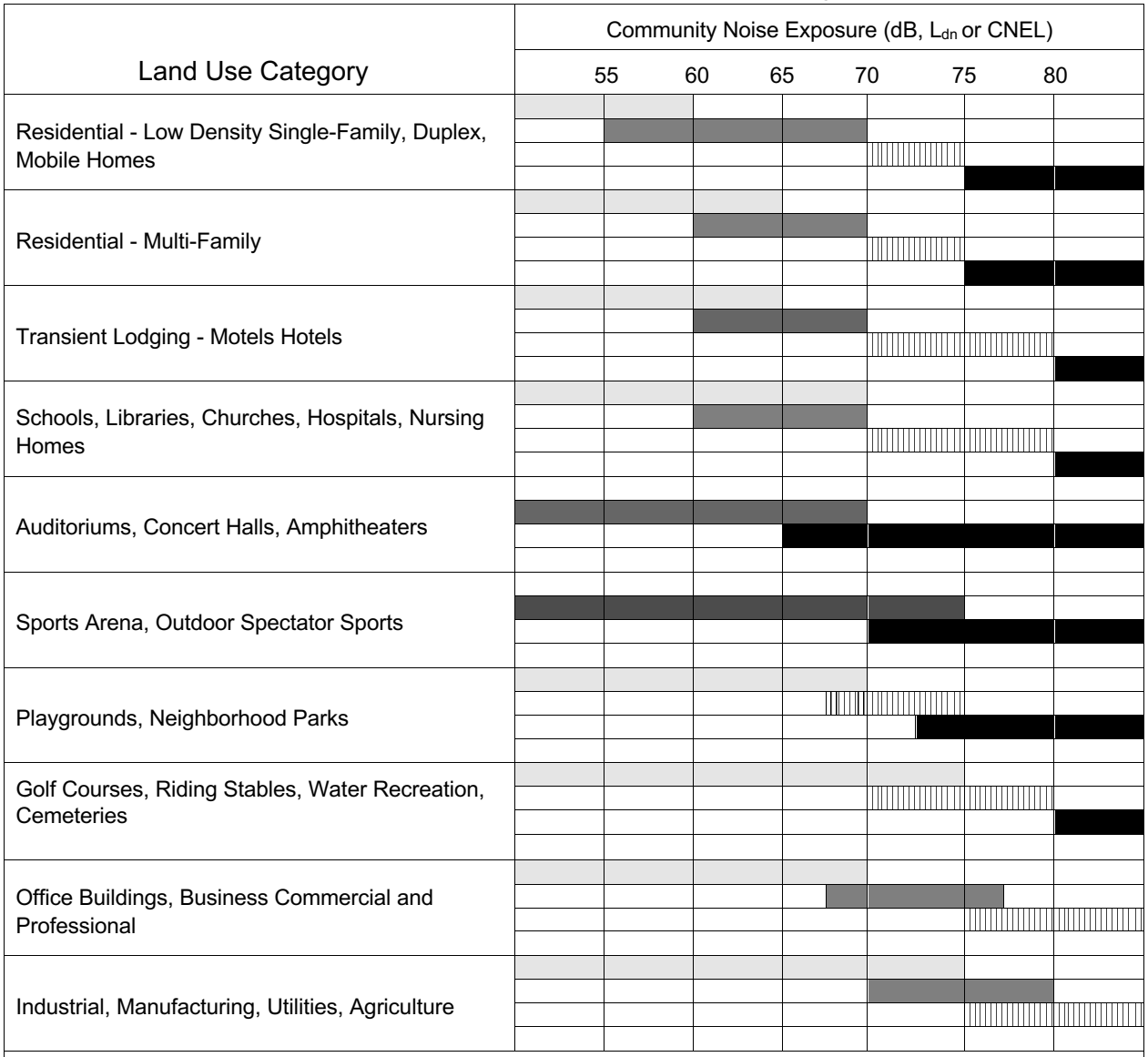
Guiding Policy NO-G-1: Maintain healthy sound environments and protect noise-sensitive uses from excessive noise exposure.

Guiding Policy 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.

Guiding Policy NO-G-3: Seek to reduce noise impacts along major freeways, roadways, and truck routes to improve the health of nearby inhabitants.

Implementing Policy NO-P-1: Use the noise and land use compatibility matrix and Future Noise Contours map 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 alter-native locations are available for the uses in the City, or impose appropriate mitigation measures to bring noise levels down to acceptable levels.

Table 2
State of California Noise/Land Use Compatibility Matrix



Source: California Office of Planning and Research "General Plan Guidelines, Noise Element Guidelines (Appendix D, Figure 2), 2017.

Implementing Policy 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 out-door and indoor noise exposure standards in Table 9-2, or California Building Code, which-ever 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.

Implementing Policy 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.

Implementing Policy 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.

Implementing Policy 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.

Implementing Policy 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 use.

City of Carson Municipal Code. The City of Carson Municipal Code (CMC) contains regulations that would regulate noise from the Project's temporary construction activities. The City largely incorporates the County of Los Angeles' noise control ordinance.

Section 12.08.390B establishes limits for exterior noise levels. Specifically, noise levels from human activity cannot exceed any of the following exterior standards:

- Standard No. 1 shall be the exterior noise level which may not be exceeded for a cumulative period of more than 15 minutes in any 30 minute period. Standard No. 1 shall be the applicable noise level from subsection A of this Section; or, if the ambient L_{50} exceeds the foregoing level, then the ambient L_{50} becomes the exterior noise level for Standard No. 1.

- Standard No. 2 shall be the exterior noise level which may not be exceeded for a cumulative period of more than 7.5 minutes in any 30 minute period. Standard No. 2 shall be the applicable noise level from subsection A of this Section plus 5 dB; or, if the ambient

L_{25} exceeds the foregoing level, then the ambient L_{25} becomes the exterior noise level for Standard No. 2.

- Standard No. 3 shall be the exterior noise level which may not be exceeded for a cumulative period of more than 2.5 minutes in any 30 minute period. Standard No. 3 shall be the applicable noise level from subsection A of this Section plus 20 dB; or, if the ambient $L_{8.3}$ exceeds the foregoing level, then the ambient $L_{8.3}$ becomes the exterior noise level for Standard No. 3.

- Standard No. 4 shall be the exterior noise level which may not be exceeded for a cumulative period of more than 30 seconds in any 30 minute period. Standard No. 4 shall be the applicable noise level from subsection A of this Section plus 15 dB; or, if the ambient $L_{1.7}$ exceeds the foregoing level, then the ambient $L_{1.7}$ becomes the exterior noise level for Standard No. 4.

- Standard No. 5 shall be the exterior noise level which may not be exceeded for any period of time. Standard No. 5 shall be the applicable noise level from subsection A of this Section plus 20 dB; or, if the ambient L_0 exceeds the foregoing level then the ambient L_0 becomes the exterior noise level for Standard No. 5.

Section 12.08.440B1 establishes construction-related limits for exterior noise levels at residential structures. Specifically, mobile equipment that is non-scheduled, intermittent, or involve short-term operation of twenty (20) days or less for construction equipment:

Time Period	Single-family Residential	Multi-family Residential
Daily, except Sundays and legal holidays, 7:00 A.M. to 8:00 P.M.	75 dBA	80 dBA
Daily, 8:00 P.M. to 7:00 A.M. and all day Sunday and legal holidays	60 dBA	64 dBA

Section 12.08.440B2 establishes construction-related limits for exterior noise levels at residential structures repetitively scheduled and relatively long-term (i.e., 21) days or more:

Time Period	Single-family Residential	Multi-family Residential
Daily, except Sundays and legal holidays, 7:00 A.M. to 8:00 P.M.	65 dBA	70 dBA
Daily, 8:00 P.M. to 7:00 A.M. and all day Sunday and legal holidays	55 dBA	60 dBA

The Carson Municipal Code provides a list of amendments added to the Los Angeles County Code for application in the City of Carson (Article V, Sanitation and Health, Chapter 5, Noise Control Ordinance, Section 5502, Amendments to Noise Control Ordinance). 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.

CMC Section 9147.2 states that no use can create a disturbance to the surrounding area through vibration, noise, or other radiations. Section 12.08.460 also prohibits activities that cause any annoyance, specifically loading, unloading, opening, closing or other handling of boxes, crates, containers, building materials, garbage cans or similar objects between 10:00 P.M. and 6:00 A.M.

Existing Conditions

Noise Sensitive Receptors

The Project Site is located on the Avalon Boulevard corridor that is home to a mix of residential and commercial uses. Sensitive receptors within 0.25 miles of the Project Site include, but are not limited to, the following representative sampling:

- Residences, Garston Avenue; 75 feet south of the Project Site.
- Bel-Aire Park mobile homes, 21425 Avalon Boulevard; 430 feet southwest of the Project Site.
- Residences, 213th Street; 720 feet west of the Project Site.
- Motel 6; 820 feet northeast of the Project Site across the San Diego Freeway

Existing Ambient Noise Levels

The Project Site is improved with five buildings that house commercial uses, including a used car facility and new car dealership that have minor sources of operational noise. These include roof-top units providing air conditioning for the building that occasionally generate minor levels of noise (approximately 81.9 dBA at one foot of distance).[7]

There is also intermittent noise from the operation of the parking lots for vehicle storage and employee parking, including tire friction as vehicles navigate to and from parking spaces, minor engine acceleration, doors slamming, and occasional car alarms. Most of these sources are instantaneous (e.g., car alarm chirp, door slam) while others may last a few seconds. There is also infrequent noise from occasional solid waste management and collection activities that are of short duration, as is occasional loading of goods that must comply with CMC Section 12.08.460.

Traffic is the primary source of noise near the Project Site, largely from the operation of vehicles with internal combustion engines and frictional contact with the ground and air.[8] The primary source of noise near the Project Site is vehicle travel. For example, Avalon Boulevard carried

7 City of Pomona, Pomona Ranch Plaza WalMart Expansion Project, Table 4.4-5; August 2014. Source was cluster of mechanical rooftop condensers including two Krack MXE-04 four-fan units and one MXE-02 two-fan unit. Reference noise level based on 30 minutes per hour of activity.

8 World Health Organization, https://www.who.int/docstore/peh/noise/Comnoise-2.pdf accessed March 18, 2021.

29,718 average daily vehicles at Carson Street in 2018.[9] The San Diego Freeway that flanks the eastern portion of the Project Site carried about 220,000 annual average daily trips at Avalon Boulevard in 2021.[10]

In August 2024, DKA Planning took short-term noise measurements near the Project site to determine the ambient noise conditions of the neighborhood near sensitive receptors.[11] As shown in Table 3, noise levels along roadways near the Project Site ranged from 63.9 to 69.7 dBA L_{eq}, which was generally consistent with the traffic volumes on local streets. Figure 1 illustrates where ambient noise levels were measured near the Project Site to establish the noise environment and their relationship to the applicable sensitive receptor(s). 24-hour CNEL noise levels are generally considered "Conditionally Acceptable" for the types of land uses near the Project Site.



DouglasKim+Associates,LLC

Figure 1
Noise Measurement Locations

[9] City of Carson Traffic Count Map, 2018; https://ci.carson.ca.us/content/files/pdfs/BusinessDev/demographics/Traffic_Count_Map.pdf .

[10] California Department of Transportation, Traffic Census Program 2021 data; https://dot.ca.gov/programs/traffic-operations/census.

[11] Noise measurements were taken using a Quest Technologies Sound Examiner SE-400 Meter. The Sound Examiner meter complies with the American National Standards Institute (ANSI) and International Electrotechnical Commission (IEC) for general environmental measurement instrumentation. The meter was equipped with an omni-directional microphone, calibrated before the day's measurements, and set at approximately five feet above the ground.

Table 3
Existing Noise Levels

Noise Measurement Locations	Primary Noise Source	Sound Levels		Nearest Sensitive Receptor(s)	Noise/Land Use Compatibility[b]
		dBA (L_{eq})	dBA (CNEL)[a]		
A. Motel 6	Traffic on San Diego Freeway	69.7	67.7	Motel 6	Conditionally Acceptable
B. Residences – 213th St.	Traffic on 213th St.	63.9	61.9	Residences – 213th St.	Conditionally Acceptable
C. Residences – Garston Ave.	Traffic on 213th St.	65.9	63.9	Residences – Garston Ave.	Conditionally Acceptable
D. Bel Aire Park Mobile Homes	Traffic on Avalon Bl.	68.7	66.7	Bel-Aire Park Mobile Homes	Conditionally Acceptable

[a] Estimated based on short-term (15-minute) noise measurement using Federal Transit Administration procedures from 2018 Transit Noise and Vibration Impact Assessment Manual, Appendix E, Option 4.
[b] Pursuant to California Office of Planning and Research "General Plan Guidelines, Noise Element Guidelines, 2017. When noise measurements apply to two or more land use categories, the more noise-sensitive land use category is used. See Table 2 above for definition of compatibility designations.

Source: DKA Planning, 2024

Project Impacts

Methodology

On-Site Construction Activities. Construction noise levels at off-site sensitive receptors were modeled employing the ISO 9613-2 sound attenuation methodologies using the SoundPLAN Essential model (version 5.1). This software package considers reference equipment noise levels, maximum allowable noise levels allowed by the CMC, noise management techniques, distance to receptors, and any attenuating features to predict noise levels from sources like construction equipment. Construction noise sources were modeled as area sources to reflect the mobile nature of construction equipment. These vehicles would not operate directly where the Project's property line abuts adjacent structures, as they would retain some setback to preserve maneuverability. This equipment would also occasionally operate at reduced power and intensity to maintain precision at these locations.

Off-Site Construction Noise Activities. The Project's off-site construction noise impact from haul trucks, vendor deliveries, worker commutes, and other vehicles accessing the Project Site was analyzed by considering the Project's anticipated vehicle trip generation with existing traffic and roadway noise levels along local roadways, particularly those likely to be part of any haul route. Because it takes a doubling of traffic volumes on a roadway to generate the increased sound energy it takes to elevate ambient noise levels by 3 dBA,[12] the analysis focused on whether truck and auto traffic would double traffic volumes on key roadways to be used for hauling soils to

[12] Federal Transit Administration, Transit Noise and Vibration Impact Assessment Manual, September 2018.

and/or from the Project Site during construction activities.[13] Because haul trucks generate more noise than traditional passenger vehicles, a 19.1 passenger car equivalency (PCE) was used to convert haul truck trips to a reference level conversion to an equivalent number of passenger vehicles.[14] For vendor deliveries, a 13.1 PCE was used to reflect an even blend of medium- and heavy-duty vehicles.[15] It should be noted that because an approved haul route may not be approved as of the preparation of this analysis, assumptions were made about logical routes that would minimize haul truck traffic on local streets in favor of major arterials that can access regional-serving freeways.

On-Site Operational Noise Activities. The Project's potential to result in significant noise impacts from on-site operational noise sources was evaluated by identifying sources of on-site noise and considering the impact that they could produce given the nature of the source (i.e., loudness and whether noise would be produced during daytime or more-sensitive nighttime hours), distances to nearby sensitive receptors, ambient noise levels near the Project Site, the presence of similar noise sources in the vicinity, and maximum noise levels permitted by the CMC.

Off-Site Operational Noise Activities. The Project's off-site noise impact from Project-related traffic was evaluated based its potential to increase traffic volumes on local roadways that serve the Project site. Because it takes a doubling of traffic volumes on a roadway to generate the increased sound energy it takes to elevate ambient noise levels by 3 dBA, the analysis focused on whether auto trips generated by the Proposed Project would double traffic volumes on key roadways that access the Project Site.

Thresholds of Significance

Construction Noise Thresholds. Based on guidelines from the City of Carson City, the on-site construction noise impact would be considered significant if construction activities of any duration would exceed the ambient noise level by 5 dBA (hourly L_{eq}) at a noise-sensitive use between the hours of 9:00 P.M. and 7:00 A.M. Monday through Friday, before 8:00 A.M. or after 6:00 P.M. on Saturday, or at any time on Sunday.

Operational Noise Thresholds. In addition to applicable City standards and guidelines that would regulate or otherwise moderate the Project's operational noise impacts, the following criteria are adopted to assess the impact of the Project's operational noise sources:

- Project operations would cause ambient noise levels at off-site locations to increase by 3 dBA CNEL or more to or within "normally unacceptable" or "clearly unacceptable" noise/land use compatibility categories, as defined by the State's 2017 General Plan Guidelines.

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13 A tripling of traffic volumes (i.e., 3.15x) is needed to elevate traffic noise levels by 5 dBA.

14 Caltrans, Technical Noise Supplement Table 3-3, 2013. Assumes 35 mph speed. While trucks traveling at higher speeds would have lower equivalency values (e.g., PCE is 15.1 at 40 mph), this analysis assumes a posted speed limit typical of major arterials (35 mph). While these equivalent vehicle factors do not consider source heights, Caltrans' factors are appropriate for use, as the local roads used by haul trucks would not involve a sound path where noise levels are intercepted by a barrier or natural terrain feature.

15 Caltrans, Technical Noise Supplement Table 3-3, 2013. Medium-duty trucks have a 7.1 PCE at 35 mph.

- Project operations would cause any 5 dBA CNEL or greater noise increase.[16]

Analysis of Project Impacts

a. Generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?

Less Than Significant Impact.

Construction

On-Site Construction Activities

Construction would generate noise during the construction process that would span 18 months of demolition, grading, utilities trenching, building construction, paving, and application of architectural coatings, as shown in Table 4. During all construction phases, noise-generating activities could occur at the Project Site between 7:00 A.M. and 8:00 P.M. Monday through Friday. On Saturdays, construction would be permitted to occur between 8:00 A.M. and 7:00 P.M.

Table 6
Construction Schedule Assumptions

Phase	Duration	Notes
Demolition	Months 1-5	Removal of 21,775 tons of debris hauled 50 miles to landfill in 12-cubic yard capacity trucks.
Grading	Months 6-9	Approximately 31,000 cubic yards of soil imported 20 miles to site in 14-cubic yard capacity trucks.
Trenching	Months 3-7	Trenching for utilities, including gas, water, electricity, and telecommunications.
Building Construction	Months 11-18	Footings and foundation work (e.g., pouring concrete pads), framing, welding; installing mechanical, electrical, and plumbing. Floor assembly, cabinetry and carpentry, elevator installations, low voltage systems, trash management.
Paving	Months 8-9	Flatwork, including paving of driveways and walkways
Architectural Coatings	Months 11-18	Application of interior and exterior coatings and sealants.
Source: DKA Planning, 2024.		

16 As a 3 dBA increase represents a slightly noticeable change in noise level, this threshold considers any increase in ambient noise levels to or within a land use's "normally unacceptable" or "clearly unacceptable" noise/land use compatibility categories to be significant so long as the noise level increase can be considered barely perceptible. In instances where the noise level increase would not necessarily result in "normally unacceptable" or "clearly unacceptable" noise/land use compatibility, a 5 dBA increase is still considered to be significant. Increases less than 3 dBA are unlikely to result in noticeably louder ambient noise conditions and would therefore be considered less than significant.

Noise levels would generally peak during the demolition and grading phases, when diesel-fueled heavy-duty equipment like excavators and dozers are used to move large amounts of debris and dirt, respectively. This equipment is mobile in nature and does not always operate at in a steady-state mode full load, but rather powers up and down depending on the duty cycle needed to conduct work. As such, equipment is occasionally idle during which time no noise is generated.

During other phases of construction (e.g., trenching, building construction, paving, architectural coatings), noise impacts are generally lesser because they are less reliant on using heavy equipment with internal combustion engines. Smaller equipment such as forklifts, generators, and various powered hand tools and pneumatic equipment would often be utilized. Off-site secondary noises would be generated by construction worker vehicles, vendor deliveries, and haul trucks. Figure 2 illustrates how noise would propagate from the construction site during the demolition and grading phase.

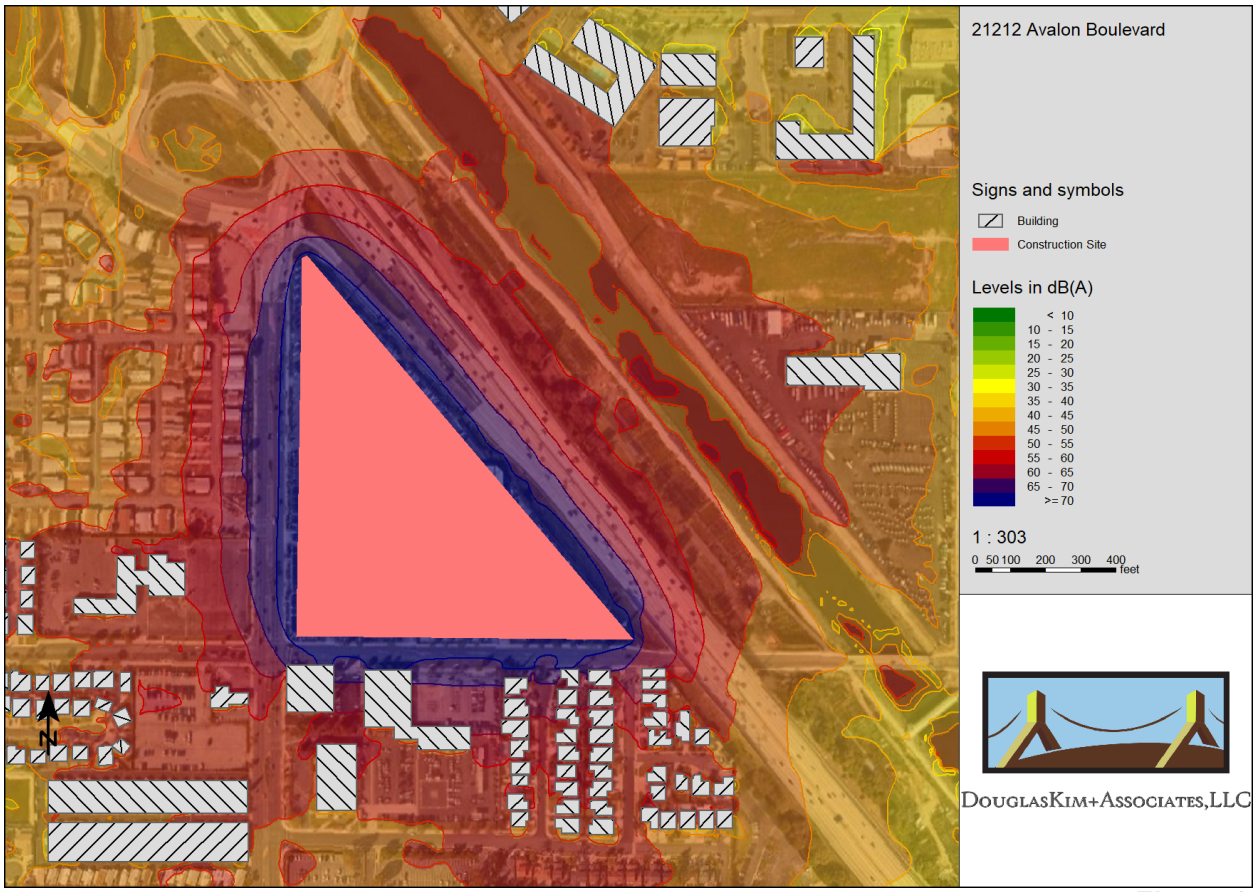


Figure 2
Construction Noise Sound Contours

As shown in Table 5, the use of multiple pieces of powered equipment simultaneously would elevate ambient noise at all four analyzed sensitive receptors. However, these construction noise

levels would not exceed the City's significance threshold of 5 dBA. Therefore, the Project's on-site construction noise impact would be less than significant.

Table 5
Construction Noise Impacts at Off-Site Sensitive Receptors

Receptor	Maximum Construction Noise Level (dBA L_{eq})	Existing Ambient Noise Level (dBA L_{eq})	New Ambient Noise Level (dBA L_{eq})	Increase (dBA L_{eq})	Potentially Significant?
1. Motel 6	48.8	69.7	69.7	0.0	No
2. Residences – 213th St.	52.3	63.9	64.2	0.3	No
3. Residences – Garston Ave.	68.5	65.9	70.4	4.5	No
4. Bel-Aire Park Mobile Homes	52.5	68.7	68.8	0.1	No
Source: DKA Planning, 2024.					

Off-Site Construction Activities

The Project would also generate noise at off-site locations from haul trucks moving debris and soil from the Project Site during demolition and grading activities, respectively; vendor trips; and worker commute trips. These activities would generate up to an estimated 584 peak hourly PCE trips, as summarized in Table 6, during the building construction phase.[17] This would represent about 30.3 percent of traffic volumes on Avalon Boulevard, which carries about 1,928 vehicles at the San Diego Freeway on-ramps in the morning peak hour of traffic.[18] Because workers and vendors will likely use more than one route to travel to and from the Project Site, this conservative assessment of traffic volumes likely overstates traffic volumes from construction activities on this roadway link.

Avalon Boulevard would serve as part of the haul route for debris and soil imported and exported, respectively, from the Project Site given its direct access to the San Diego Freeway. Because the Project's construction-related trips would not cause a doubling in traffic volumes (i.e., 100 percent increase) on Avalon Boulevard, the Project's construction-related traffic would not increase existing noise levels by 3 dBA or more, let alone the 5 dBA threshold of significance for off-site construction noise activities. Therefore, the Project's noise impacts from construction-related traffic would be less than significant.

[17] This is a conservative, worst-case scenario, as it assumes all workers travel to the worksite at the same time and that vendor and haul trips are made in the same early hour, using the same route as haul trucks to travel to and from the Project Site.

[18] City of Carson Traffic Count Map, 2018; https://ci.carson.ca.us/content/files/pdfs/BusinessDev/demographics/Traffic_Count_Map.pdf . Assumes eight percent of daily traffic occurs in A.M. peak hour.

Table 6
Construction Vehicle Trips (Maximum Hourly)

Construction Phase	Worker Trips [a]	Vendor Trips	Haul Trips	Total Trips	Percent of Peak A.M. Hour Trips on Avalon Blvd.[e]
Demolition	15	0	230[b]	245	12.7
Grading	20	0	139[c]	159	8.2
Trenching	3	0	0	3	0.1
Building Construction	320	264[d]	0	584	30.3
Paving	15	0	0	15	0.8
Architectural Coating	64	0	0	64	3.3

[a] Assumes all worker trips occur in the peak hour of construction activity.
[b] The project would generate 7,241 haul trips over an 86-day period with seven-hour work days. Because haul trucks emit more noise than passenger vehicles, a 19.1 passenger car equivalency (PCE) was used to convert haul truck trips to a passenger car equivalent
[c] The project would generate 4,429 haul trips over an 87-day period with seven-hour work days. Assumes a 19.1 PCE.
[d] This phase would generate about 71 vendor truck trips daily over a seven-hour work day. Assumes a blend of medium- and heavy-duty vehicle types and a 13.1 PCE.
[e] Percent of existing traffic volumes on Avalon Boulevard at San Diego Freeway on-ramp.

Source: DKA Planning, 2024

Operation

On-Site Operational Noise

During long-term operations, the Project would produce noise from on-site sources such as mechanical equipment associated with the structures themselves or from activity in outdoor spaces.

Mechanical Equipment

The Project's three-story townhomes (Plans B, C, D) would operate mechanical equipment on the roof 28 feet above grade that would generate incremental long-term noise impacts. This would include the use of typical HVAC equipment for cooling or heat pumps for cooling and heating for multi-family residences (e.g., 2.5-ton Carrier 24ABC630A003 Carrier 25HBC5), with each unit distributed across the roof as needed to serve each residence. Noise from heat pumps and air conditioners is a function of the model, airflow, and pressure flow generated by fans and compressors. Most modern heat pumps are relatively quiet, with sound ratings of up to 60

decibels, equivalent to normal human conversation,[19] while other HVAC units could have a sound power of up to 76 dBA.

However, noise impacts from rooftop mechanical equipment on nearby sensitive receptors would be negligible for several reasons. First, there would be no line-of-sight from these rooftop units to the sensitive receptors across 213th Street that are one- to two-stories in height, lower than the roof of the Proposed Project. As blocking the line of sight to a noise source generally results in a 5 decibel reduction, each rooftop unit could generate about 50.3 dBA at ten feet of distance.[20] Second, the presence of the Project's roof edge creates an effective noise barrier that further reduces noise levels from rooftop units by 8 dBA or more.[21] A ten-foot high roof parapet would further shield sensitive receptors near the Project Site. These design elements would be helpful in managing noise, as equipment often operates continuously throughout the day and occasionally during the day, evenings, and weekends. Finally, there is a 95-foot buffer from the townhouses along 213th Street to the residences on Gerston Avenue and Selwyn Avenue. When combined with the elevated ambient noise levels from traffic on 213th Street, any noise from mechanical equipment would be negligible. As a result, noise from rooftop units would negligibly elevate ambient noise levels, far less than the 5 dBA CNEL threshold of significance for operational impacts.

The Project's one-story two-plexes (Product A) would include outdoor mechanical equipment for heating and cooling for each residence, likely on the ground level. This could include ground-mounted heat pumps that would generate noise during both heating and cooling sessions while air conditioners operate during cooling cycles.[22] This equipment would include a number of sound sources, including compressors, condenser fans, supply fans, return fans, and exhaust fans. These units could be rated to generate a sound power between 51 and 76 dBA. Any off-site sensitive receptors would not experience elevated noise levels without a direct line-of-sight to these units. Given their location near each residence, any sound path from these units would likely be attenuated by the presence of the residences and structures in the development, as well as the distance to off-site receptors. In addition, these residences at the north of the Project Site do not have a line of sight to sensitive receptors in any direction. As a result, noise from HVAC units would negligibly elevate ambient noise levels, far less than the 5 dBA CNEL threshold of significance for operational impacts.

Pad-mounted oil transformers that lower high voltage to standard household voltage used to power electronics, appliances and lighting would be located on the ground level in unobstructed

19 Clean British Columbia. Heat Pumps and Noise. https://vancouver.ca/files/cov/heat-pump-noise-guide.pdf

20 Washington State Department of Transportation, Noise Walls and Barriers. https://wsdot.wa.gov/construction-planning/protecting-environment/noise-walls-barriers. Assumes the Carrier's rated sound power of 76 dB.

21 Ibid.

22 Given the Project Site's location in Climate Zone 9, Title 24 would also allow a more conventional gas heating system that uses an internal furnace paired with an external air conditioner that would be ground-mounted.

locations. These transformers would be housed in a steel cabinet and generally would not involve pumps, though fans may be needed on some units. Switchgear responsible for distributing power through the development could be located externally, though no mechanical processes that generate noise would be necessary. Otherwise, all other mechanical equipment would be fully enclosed within each of the Project's structures. Equipment and pumps for the recreation center's pool and spa would be enclosed in a building. All these activities would generally occur within the envelope of the development, operational noise would be shielded from off-site noise-sensitive receptors.

Parking-Related Activities

The majority of parking-related noise impacts at the Project Site would come from vehicles entering and exiting the residential development from driveways off Avalon Boulevard and 213th Street. These vehicles would generate incremental noise from tire friction as they navigate to and from garage spaces or open air visitor spaces.

Parking-related noise would include also include door slamming (generally instantaneous) and car alarms, while could last a few seconds. These activities would be within an enclosed garage structure and as such, shielded largely from nearby sensitive receptors. Any noise from outdoor parking spaces within the interior of the development would be shielded by the residential buildings that face Avalon Boulevard and 213th Street. Therefore, the Project's parking garage activities would not have a significant impact on the surrounding noise environment.

Outdoor Uses

While most operations would be conducted inside the development, outdoor activities could generate noise that could impact local sensitive receptors. This would include human conversation, recreation, trash collection, landscape maintenance. These are discussed below:

- Human conversation. This would include human conversation in outdoor spaces, such as private balconies in the townhomes. These would be private spaces for residents used for socializing or passive recreation (e.g., reading), with intermittent use largely during day or evening hours. No powered speakers are proposed that would amplify either speech or music.

  The primary use of these spaces would be for human conversation, which would produce negligible noise impacts, based on the Lombard effect. This phenomenon recognizes that voice noise levels in face-to-face conversations generally increase proportionally to background ambient noise levels. Specifically, vocal intensity increases about 0.38 dB for every 1.0 dB increase in noise levels above 55 dB.[23] For example, the sound of a human voice at 60 dB would produce a noise level of 39 dB at ten feet, which would not elevate ambient noise levels at any of the analyzed sensitive receptors by more than 0.2 dBA L_{eq}. Moreover,

[23] Acoustical Society of America, Volume 134; Evidence that the Lombard effect is frequency-specific in humans, Stowe and Golob, July 2013.

noise levels from human speech would attenuate rapidly with greater distance, resulting in a 33 dB noise level at twenty feet, and 27 dB at 40 feet.[24]

- Recreation. A recreation area at the north end of the Project Site would include an open air swimming pool. Noise from open-air swimming pools can vary based on a variety of factors, but can average about 75 dB per person, producing a sound power of about 83.3 dBA.[25] Noise at off-site sensitive receptors would be negligible, however, as the pool is fully surrounded on all four sides by the development, thereby shielding off-site sensitive receptors from any noise. Therefore, this impact would be less than significant.

- Trash collection. On-site trash and recyclable materials for the residents would be managed from each residential building. Bins would be moved to the street and/or driveways manually. Haul trucks would access solid waste from Avalon Boulevard or 213th Street, where solid waste activities would include use of trash compactors and hydraulics associated with the refuse trucks themselves. Noise levels of approximately 71 dBA L_{eq} and 66 dBA L_{eq} could be generated by collection trucks and trash compactors, respectively, at 50 feet of distance.[26] As these activities would be comparable to existing trash collection activities for the commercial developments, solid waste-related noise would be insignificant.

- Landscape maintenance. Noise from gas-powered leaf blowers, lawnmowers, and other landscape equipment can generated substantial bursts of noise during regular maintenance. For example, two gas powered leaf blowers with two-stroke engines and a hose vacuum can generate an average of 85.5 dBA L_{eq} and cause nuisance or potential noise impacts for nearby receptors.[27] The landscape plan focuses on a modest palette of accent trees and raised planters that will minimize the need for powered landscaping equipment, as some of this can be managed by hand. Because CNEL levels represent the energy average of sound levels during a 24-hour period, the modest sound power from a few minutes of maintenance activities during daytime hours would negligibly affect CNEL sound levels.

As discussed above, the Project would not result in an exposure of persons to or a generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies. The Project would also not increase surrounding noise levels by more than 5 dBA CNEL, the minimum threshold of significance based on the noise/land use category of sensitive receptors near the Project Site. As a result, the Project's on-site operational noise impacts would be considered less than significant,

Off-Site Operational Noise

The majority of the Project's operational noise impacts would be off-site from vehicles traveling to and from the development. The Project could add 2,350 vehicle trips to the local roadway network

[24] Public Resources Code Section 21085 states that for residential projects, the effects of noise generated by project occupants and their guests on human beings is not a significant effect on the environment.

[25] VDI Association of German Engineers; VDI 37700--Emission Characteristics of Sound Sources-Sport and Leisure Facilities; September 2012. Reference noise level from open-air adult swimming pool, assumes density of ten square meters per person.

[26] RK Engineering Group, Inc. Wal-Mart/Sam's Club reference noise level, 2003.

[27] Erica Walker et al, Harvard School of Public Health; Characteristics of Lawn and Garden Equipment Sound; 2017. These equipment generated a range of 74.0-88.5 dBA Leq at 50 feet.

on weekdays when the development could be operational in 2026.[28] During the peak P.M. hour, up to 185 vehicles would generate noise entering or exiting the development, with up to 158 vehicles in the peak A.M. hour.[29] This would represent a small addition to traffic volumes on local roadways. For example, it would represent 7.9 percent of the 29,718 average daily vehicles that used Avalon Boulevard at Carson Street in 2018.[30]

Because it takes a doubling of traffic volumes (i.e., 100 percent) to increase ambient noise levels by 3 dBA L_{eq}, the Project's traffic would neither increase ambient noise levels 3 dBA or more into "normally unacceptable" or "clearly unacceptable" noise/land use compatibility categories, nor increase ambient noise levels 5 dBA or more. Twenty-four hour CNEL impacts would similarly be minimal, far below criterion for significant operational noise impacts, which begin at 3 dBA. As such, this impact would be considered less than significant.

Consistency with City General Plan Noise Element

While the City's Noise Element focuses on a number of measures for Citywide implementation by municipal government, there are some objectives, policies, and programs that are applicable to development projects. Table 7 summarizes the Proposed Project's consistency with these.

Table 7
Project Consistency with City of Carson General Plan Noise Element

Policy	Project Consistency
Guiding Policy NO-G-1: Maintain healthy sound environments and protect noise-sensitive uses from excessive noise exposure.	**Consistent.** The Project would comply with City, state, and other applicable noise regulations to ensure that noise impacts are considered less than significant.
Guiding Policy 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.	**Consistent.** The project is being evaluated under CEQA and would result in less-than-significant impacts on noise.
Guiding Policy NO-G-3: Seek to reduce noise impacts along major freeways, roadways, and truck routes to improve the health of nearby inhabitants.	**Consistent.** The Project would not have a significant noise impact on noise-sensitive uses and as such, would not require mitigation under CEQA.
Implementing Policy NO-P-1: Use the noise and land use compatibility matrix and Future Noise Contours map as criteria to determine acceptability of a land use. Seek to limit new noise-sensitive uses—including schools, hospitals, places of worship, and homes—	**Consistent.** The ambient noise levels at the Project Site do not exceed "Normally Acceptable" or "Conditionally Acceptable" levels. Further, this analysis confirms that the Project will neither impact short- or long-term noise levels significantly for sensitive receptors.

[28] Carson Kott Daily & Peak Trip Generation Estimates based on ITE Trip Generation, 11th Edition; August 2024.

[29] Ibid.

[30] City of Carson Traffic Count Map, 2018; https://ci.carson.ca.us/content/files/pdfs/BusinessDev/demographics/Traffic_Count_Map.pdf .

Table 7
Project Consistency with City of Carson General Plan Noise Element

Policy	Project Consistency
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.	
Implementing Policy 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 out-door and indoor noise exposure standards in Table 9-2, or California Building Code, which-ever 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.	**Consistent.** The ambient noise levels at the Project Site do not exceed "Normally Acceptable" or "Conditionally Acceptable" levels. Further, this analysis confirms that the Project will neither impact short- or long-term noise levels significantly for sensitive receptors. The noise-sensitive project is being evaluated under CEQA and would comply with Building Code and Title 24 noise insulation requirements to achieve an interior noise level of 45 dB.
Implementing Policy 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.	**Consistent.** The Project will not require noise buffering during the construction or operational phases.
Implementing Policy 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.	**Consistent.** The Project will not require noise buffering during the construction or operational phases.
Implementing Policy NO-P-5: Require control of new developments deemed to be noise generators through site design, building design,	**Consistent.** The Project will not require noise buffering during the construction or operational phases. The ambient noise levels at the Project Site do not exceed

Table 7
Project Consistency with City of Carson General Plan Noise Element

Policy	Project Consistency
landscaping, hours of operation, and other techniques for such that noise at site edges do not exceed performance-based standards.	"Normally Acceptable" or "Conditionally Acceptable" levels. Further, this analysis confirms that the Project will neither impact short- or long-term noise levels significantly for sensitive receptors. The noise-sensitive project is being evaluated under CEQA and would comply with Building Code and Title 24 noise insulation requirements to achieve an interior noise level of 45 dB.
Implementing Policy 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 use.	**Consistent.** The noise-sensitive project is being evaluated under CEQA and would comply with Building Code and Title 24 noise insulation requirements to achieve an interior noise level of 45 dB.
Source: DKA Planning, 2024.	

b. 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?

Less Than Significant Impact.

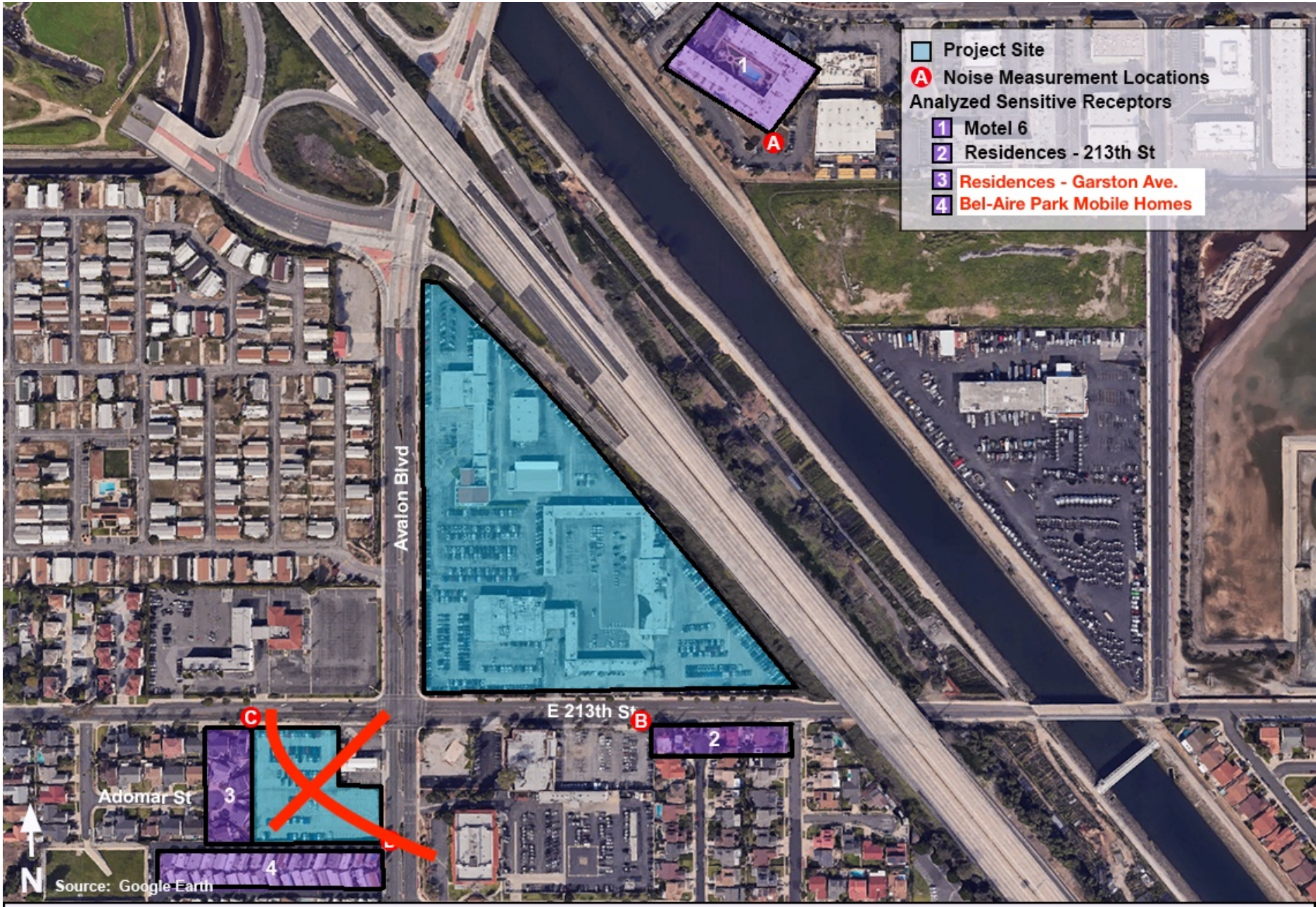
The Project Site is located about 4.5 miles east of Torrance Airport, 5.6 miles west of Long Beach Airport, and 3.8 miles south of the Compton/Woodley Airport. Because the Proposed Project would not be located within the vicinity of a private airstrip or within two miles of a public airport, the Project would not expose local workers or residents in the area to excessive noise levels. This would be considered a less than significant impact.

TECHNICAL APPENDIX



DouglasKim+Associates,LLC

AMBIENT NOISE MEASUREMENTS



DouglasKim+Associates,LLC

Figure 1
Noise Measurement Locations

Session Report

8/4/2024

Information Panel

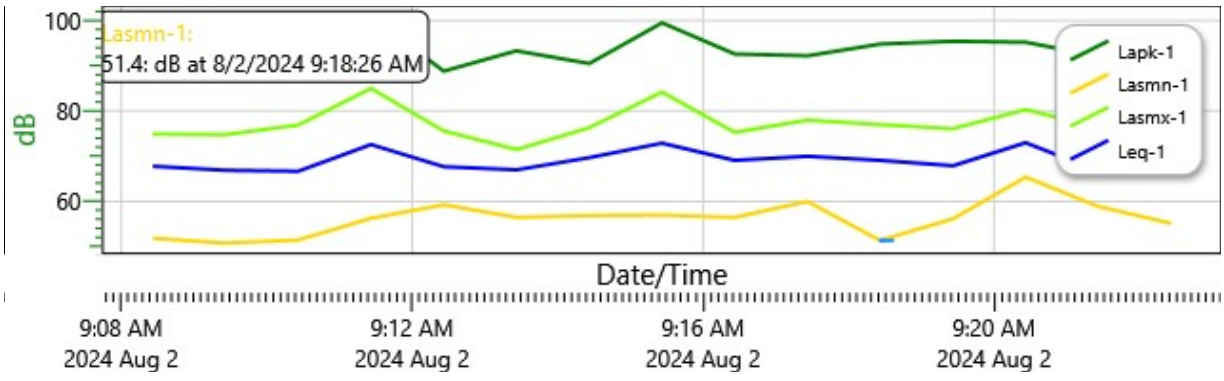
Name	Motel 6
Comments	
Start Time	8/2/2024 9:07:26 AM
Stop Time	8/2/2024 9:22:28 AM
Run Time	00:15:02
Serial Number	SE40214325
Device Name	SE40214325
Model Type	Sound Examiner
Device Firmware Rev	R.11F
Company Name	
Description	
Location	
User Name	

Summary Data Panel

Description	Meter	Value	Description	Meter	Value
Leq	1	69.7 dB			
Exchange Rate	1	3 dB	Weighting	1	A
Response	1	SLOW	Bandwidth	1	OFF

Logged Data Chart

Motel 6: Logged Data Chart



Logged Data Table

Date/Time	Lapk-1	Lasmn-1	Lasmx-1	Leq-1
8/2/2024 9:08:26 AM	92.1	51.9	74.9	67.8
9:09:26 AM	90	50.8	74.8	66.9
9:10:26 AM	100.2	51.5	76.9	66.7
9:11:26 AM	100.9	56.3	85	72.6
9:12:26 AM	88.8	59.3	75.6	67.7
9:13:26 AM	93.3	56.5	71.5	67
9:14:26 AM	90.5	56.9	76.3	69.7
9:15:26 AM	99.5	57	84.2	72.9
9:16:26 AM	92.6	56.5	75.3	69.1
9:17:26 AM	92.2	60	78	70
9:18:26 AM	94.8	51.4	77	69.1
9:19:26 AM	95.4	56.2	76.1	67.9
9:20:26 AM	95.2	65.4	80.3	73
9:21:26 AM	92.1	58.9	76.3	66.7
9:22:26 AM	91.5	55.2	77.2	70.3

Session Report

8/4/2024

Information Panel

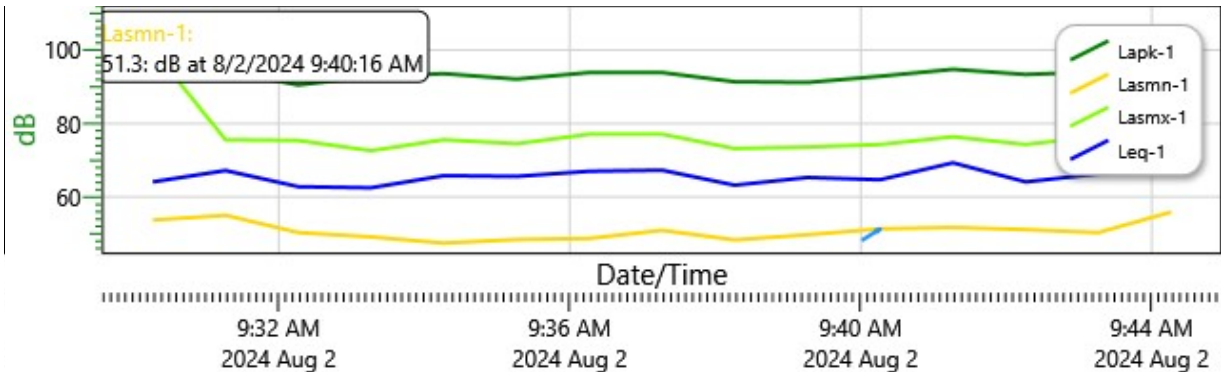
Name	Garston Avenue cul-de-sac (213th Street frontage)
Comments	
Start Time	8/2/2024 9:29:16 AM
Stop Time	8/2/2024 9:44:19 AM
Run Time	00:15:03
Serial Number	SE40214325
Device Name	SE40214325
Model Type	Sound Examiner
Device Firmware Rev	R.11F
Company Name	
Description	
Location	
User Name	

Summary Data Panel

Description	Meter	Value	Description	Meter	Value
Leq	1	65.9 dB			
Exchange Rate	1	3 dB	Weighting	1	A
Response	1	SLOW	Bandwidth	1	OFF

Logged Data Chart

Garston Avenue cul-de-sac (213th Street frontage): Logged Data Chart



Logged Data Table

Date/Time	Lapk-1	Lasmn-1	Lasmx-1	Leq-1
8/2/2024 9:30:16 AM	109.2	53.7	100.2	64.1
9:31:16 AM	94.3	55	75.6	67.2
9:32:16 AM	90.5	50.3	75.4	62.8
9:33:16 AM	92.8	49.1	72.6	62.5
9:34:16 AM	93.6	47.4	75.6	65.8
9:35:16 AM	92.1	48.4	74.5	65.6
9:36:16 AM	93.9	48.7	77.1	67
9:37:16 AM	93.9	50.9	77.1	67.3
9:38:16 AM	91.4	48.3	73.2	63.2
9:39:16 AM	91.2	49.7	73.6	65.3
9:40:16 AM	92.9	51.3	74.3	64.7
9:41:16 AM	94.8	51.7	76.4	69.3
9:42:16 AM	93.4	51.1	74.3	64.1
9:43:16 AM	94.1	50.3	76.5	66.3
9:44:16 AM	90.9	55.9	77.4	67.1

Session Report

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Information Panel

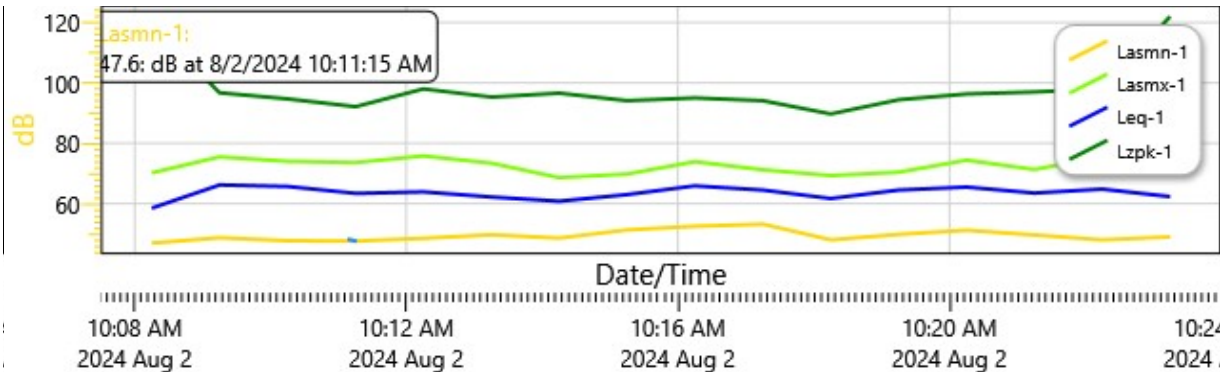
Name	624 213th Street
Comments	
Start Time	8/2/2024 10:07:15 AM
Stop Time	8/2/2024 10:23:16 AM
Run Time	00:16:01
Serial Number	SE40213991
Device Name	SE40213991
Model Type	Sound Examiner
Device Firmware Rev	R.11F
Company Name	
Description	
Location	
User Name	

Summary Data Panel

Description	Meter	Value	Description	Meter	Value
Leq	1	63.9 dB			
Exchange Rate	1	3 dB	Weighting	1	A
Response	1	SLOW	Bandwidth	1	OFF

Logged Data Chart

624 213th Street: Logged Data Chart



Logged Data Table

Date/Time	Lzpk-1	Lasmn-1	Lasmx-1	Leq-1
8/2/2024 10:08:15 AM	119.3	46.9	70.2	58.5
10:09:15 AM	96.7	48.7	75.5	66.2
10:10:15 AM	94.7	47.7	74	65.7
10:11:15 AM	92.1	47.6	73.6	63.4
10:12:15 AM	98	48.5	75.8	63.9
10:13:15 AM	95.3	49.7	73.4	62.2
10:14:15 AM	96.6	48.6	68.6	60.8
10:15:15 AM	94.1	51.3	69.8	63
10:16:15 AM	95	52.5	73.9	65.9
10:17:15 AM	94.1	53.2	71.2	64.5
10:18:15 AM	89.7	48	69.3	61.7
10:19:15 AM	94.4	49.8	70.4	64.5
10:20:15 AM	96.3	51.2	74.4	65.5
10:21:15 AM	97	49.6	71.3	63.5
10:22:15 AM	98	48	75.6	64.8
10:23:15 AM	122	49	70.1	62.3

Session Report

8/4/2024

Information Panel

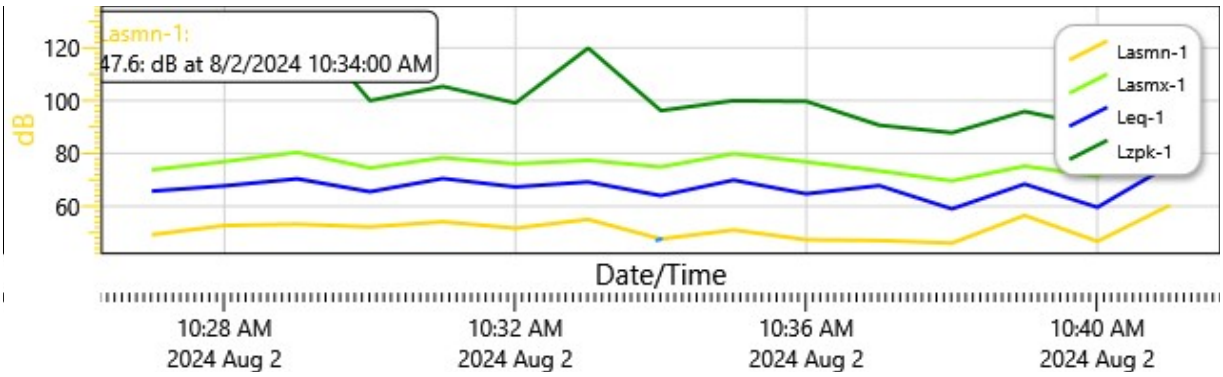
Name	Bel-Aire Park
Comments	
Start Time	8/2/2024 10:26:00 AM
Stop Time	8/2/2024 10:41:59 AM
Run Time	00:15:59
Serial Number	SE40213991
Device Name	SE40213991
Model Type	Sound Examiner
Device Firmware Rev	R.11F
Company Name	
Description	
Location	
User Name	

Summary Data Panel

Description	Meter	Value	Description	Meter	Value
Leq	1	68.7 dB			
Exchange Rate	1	3 dB	Weighting	1	A
Response	1	SLOW	Bandwidth	1	OFF

Logged Data Chart

Bel-Aire Park: Logged Data Chart



Logged Data Table

Date/Time	Lzpk-1	Lasmn-1	Lasmx-1	Leq-1
8/2/2024 10:27:00 AM	130.7	49.2	73.8	65.7
10:28:00 AM	129.2	52.7	76.9	67.7
10:29:00 AM	131.9	53.2	80.4	70.4
10:30:00 AM	100	52.2	74.5	65.5
10:31:00 AM	105.4	54.1	78.4	70.5
10:32:00 AM	99.1	51.7	76.1	67.3
10:33:00 AM	119.9	55	77.4	69.2
10:34:00 AM	96.2	47.6	74.9	64
10:35:00 AM	100	51	79.9	69.9
10:36:00 AM	99.7	47.3	76.8	64.7
10:37:00 AM	90.7	47	73.4	67.8
10:38:00 AM	87.8	46	69.6	59
10:39:00 AM	95.9	56.5	75.2	68.4
10:40:00 AM	90.2	46.7	71.3	59.6
10:41:00 AM	111.6	60.4	88.9	75.7



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CONSTRUCTION NOISE CALCULATIONS

Noise emissions of industry sources

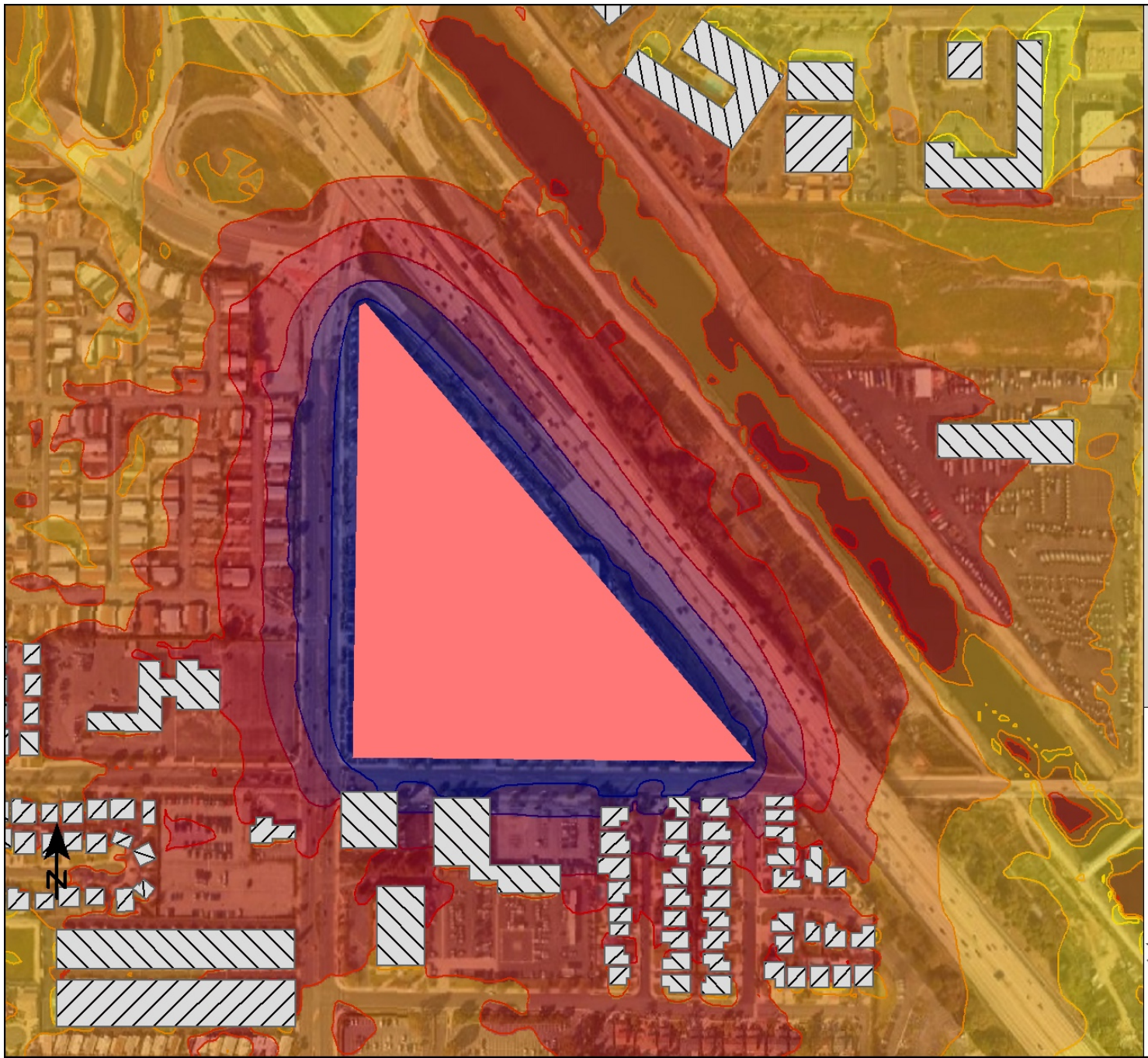
Source name	Size m/m²	Reference	Level Day dB(A)	Level Evening dB(A)	Level Night dB(A)	Corrections Cwall dB	Corrections CI dB	Corrections CT dB
Construction Site	48875 m²	Lw/unit	123.7	-	-	-	-	-

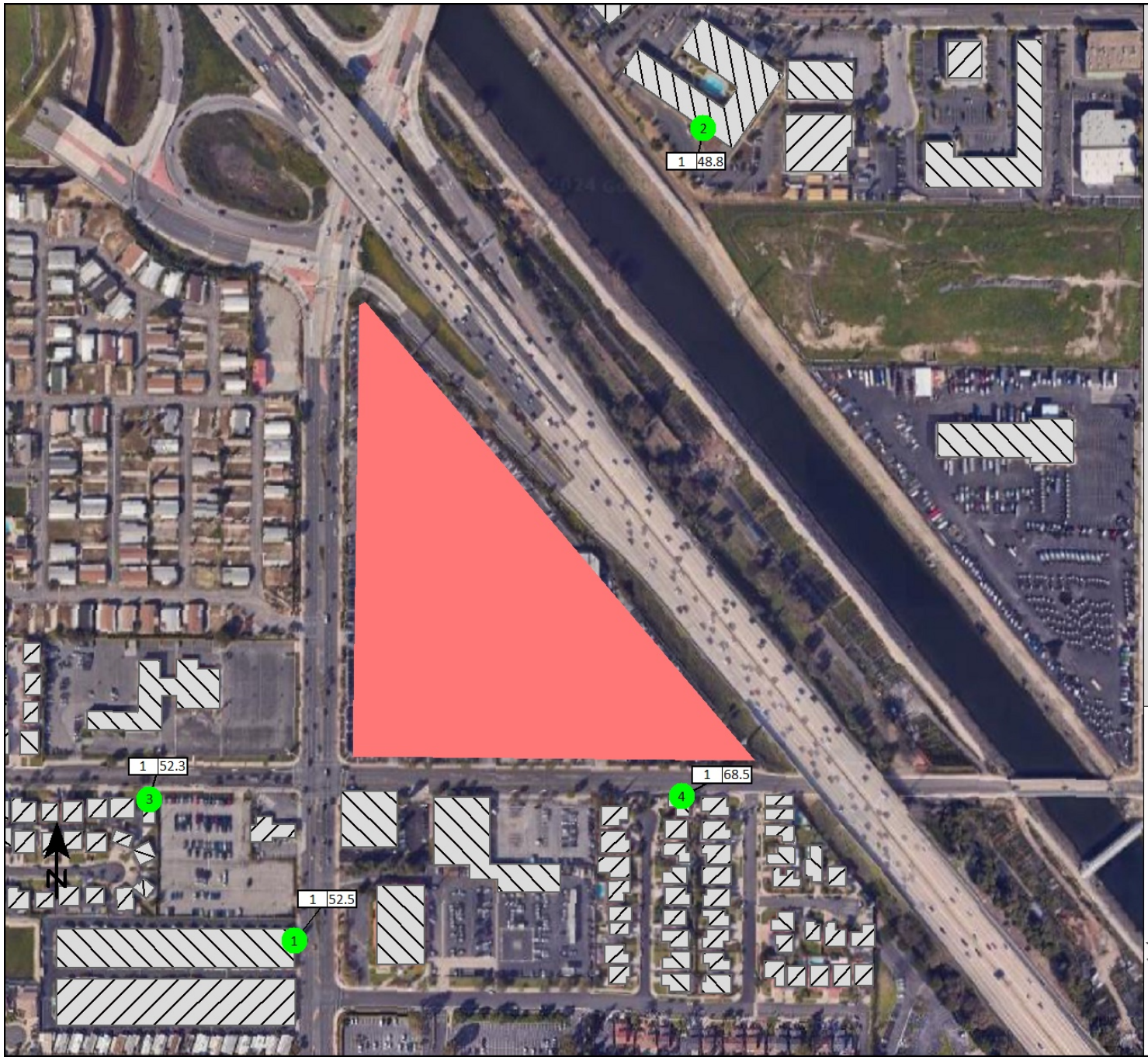
Receiver list

No.	Receiver name	Coordinates X in meter	Coordinates Y in meter	Building side	Floor	Height abv.grd. m	Limit Day dB(A)	Level Day dB(A)	Conflict Day dB
1	Bel-Aire Park Mobile Homes	11383053.62	3744503.78	East	GF	9.26	-	52.5	-
2	Motel 6	11383349.88	3745092.42	South west	GF	8.95	-	48.8	-
3	Residences - 213th St.	11382948.43	3744606.44	North	GF	9.37	-	52.3	-
4	Residences - Garston St.	11383334.20	3744608.41	North	GF	9.09	-	68.5	-

Contribution levels of the receivers

Source name		Traffic lane	Level Day dB(A)
Bel-Aire Park Mobile Homes	GF		52.5
Construction Site		-	52.5
Motel 6	GF		48.8
Construction Site		-	48.8
Residences - 213th St.	GF		52.3
Construction Site		-	52.3
Residences - Garston St.	GF		68.5
Construction Site		-	68.5


21212 Avalon Boulevard
Signs and symbols
Building
Construction Site
Levels in dB(A)
< 10
10 - 15
15 - 20
20 - 25
25 - 30
30 - 35
35 - 40
40 - 45
45 - 50
50 - 55
55 - 60
60 - 65
65 - 70
>= 70
1 : 303
0 50 100 200 300 400
feet
N
DouglasKim+Associates,LLC



21212 Avalon Boulevard

Signs and symbols

Building

Analyzed Sensitive Receptor

Construction Site

1 : 303

0 50 100 200 300 400 feet

DouglasKim+Associates,LLC

Construction Noise Impacts



Reference	15.24	meter
Sound Pressure Level (Lp)	90.1	dBA

Receptor	Existing Leq	Noise	New Leq	Difference Leq	Significant?
Motel 6	69.7	48.8	69.7	0.0	**No**
Residences - 213th St.	63.9	52.3	64.2	0.3	**No**
Residences - Garston Ave.	65.9	68.5	70.4	4.5	**No**
Bel-Aire Park Trailer Park	68.7	52.5	68.8	0.1	**No**

OFF-SITE CONSTRUCTION-RELATED TRAVEL VOLUMES

Construction Phase	Worker Trips	Vendor Trips	Haul Trips	Total	% of Traffic Volumes
Demolition	15	0	229.7	245	12.7%
Grading	20	0	139	159	8.2%
Trenching	2.5	0		3	0.1%
Building Construction	320	263.9		584	30.3%
Paving	15	0.0		15	0.8%
Architectural Coatings	63.9	0		63.9	3.3%

Haul trips represent heavy-duty truck trips with a 19.1 Passenger Car Equivalent applied; Vendor trips are an even split of medium- and heav

1,928 Traffic Volumes on Avalon Boulevard at 405-On-Ramp in the peak A.M. hour

ATTACHMENT D
VIBRATION REPORT

VIBRATION TECHNICAL REPORT

Introduction

This section evaluates vibration impacts that would be generated by construction and operation of the Proposed Carson Triangle Project at 21212 Avalon Boulevard in the City of Carson. The analysis compares these impacts to applicable regulations and thresholds of significance. Vibration calculation worksheets are included in the Technical Appendix.

Fundamentals of Vibration

Characteristics of Vibration. Vibration is an oscillatory motion through a solid medium in which the motion's amplitude can be described in terms of displacement, velocity, and acceleration. Unlike noise, vibration is not a common environmental problem, as it is unusual for vibration from vehicle sources to be perceptible. Common sources of vibration include trains, construction activities, and certain industrial operations.

Vibration Definitions. This analysis discusses vibration in terms of Peak Particle Velocity (PPV). PPV is commonly used to describe and quantify vibration impacts to buildings and other structures. PPV levels represent the maximum instantaneous peak of a vibration signal and are usually measured in inches per second.[1] This analysis also discusses the vibration of events in decibel scale, known as Vibration Decibels (VdB), which is a unitless measure of vibration that is expressed on a logarithmic scale.

Effects of Vibration. High levels of vibration may cause physical personal injury or damage to buildings. However, groundborne vibration levels rarely affect human health. Instead, most people consider groundborne vibration to be an annoyance that can disrupt concentration or disturb sleep. Groundborne vibration can also interfere with certain types of highly sensitive equipment and machines, especially imaging devices used in medical laboratories.

Perceptible Vibration Changes. Unlike noise, groundborne vibration is not an environmental issue that most people experience every day. Background vibration levels in residential areas are usually well below the threshold of perception for humans, approximately 0.01 inches per second.[2] Perceptible indoor vibrations are most often caused by sources within buildings themselves, such as slamming doors or heavy footsteps. Common outdoor sources of groundborne vibration include construction equipment, trains, and traffic on rough or unpaved roads. Traffic vibration from smooth and well-maintained roads is typically not perceptible.

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1 California Department of Transportation, Transportation and Construction Vibration Guidance Manual, April 2020; https://dot.ca.gov/-/media/dot-media/programs/environmental-analysis/documents/env/tcvgm-apr2020-a11y.pdf.

2 Ibid.

Regulatory Framework

Federal

Federal Transit Administration (FTA). In 2018, the FTA published the Transit Noise and Vibration Impact Assessment Manual to aid in the estimation and analysis of vibration impacts. Typically, potential building and structural damages are the foremost concern when evaluating the impacts of construction-related vibrations. Table 1 summarizes FTA's vibration guidelines for building and structural damage. While these are reference values for vibration levels at 25 feet of distance, this analysis uses logarithmic equations to determine whether building damage would occur regardless of actual distance between construction activity and nearby buildings.

Table 1
FTA Vibration Damage Potential Threshold Criteria

Structure and Condition	Threshold Criteria (in/sec PPV) at 25 Feet
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
Source: Federal Transit Administration "Transit Noise and Vibration Impact Assessment Manual", September 2018.	

The FTA Assessment Manual also cites criteria for cases where more detailed analysis may be required. For buildings consisting of concrete wall and floor foundations, masonry or concrete walls, or stone masonry retaining walls, continuous vibrations of 0.3 inches per second PPV can be damaging. For buildings consisting of steel or reinforced concrete, such as factories, retaining walls, bridges, steel towers, open channels, underground chambers and tunnels with and without concrete alignment, continuous vibrations of 0.5 inches per second PPV can be damaging.

State

California's Civil Code Section 832 protects adjacent properties when excavation of a site occurs.

> *Each coterminous owner is entitled to the lateral and subjacent support which his land receives from the adjoining land, subject to the right of the owner of the adjoining land to make proper and usual excavations on the same for purposes of construction or improvement, under the following conditions:*
>
> *1. Any owner of land or his lessee intending to make or to permit an excavation shall give reasonable notice to the owner or owners of adjoining lands and of buildings or other structures, stating the depth to which such excavation is intended to be made, and when the excavating will begin.*
>
> *2. In making any excavation, ordinary care and skill shall be used, and reasonable precautions taken to sustain the adjoining land as such, without regard to any building or other structure which may be thereon, and there shall be no liability for*

damage done to any such building or other structure by reason of the excavation, except as otherwise provided or allowed by law.

3. If at any time it appears that the excavation is to be of a greater depth than are the walls or foundations of any adjoining building or other structure, and is to be so close as to endanger the building or other structure in any way, then the owner of the building or other structure must be allowed at least 30 days, if he so desires, in which to take measures to protect the same from any damage, or in which to extend the foundations thereof, and he must be given for the same purposes reasonable license to enter on the land on which the excavation is to be or is being made.

4. If the excavation is intended to be or is deeper than the standard depth of foundations, which depth is defined to be a depth of nine feet below the adjacent curb level, at the point where the joint property line intersects the curb and if on the land of the coterminous owner there is any building or other structure the wall or foundation of which goes to standard depth or deeper then the owner of the land on which the excavation is being made shall, if given the necessary license to enter on the adjoining land, protect the said adjoining land and any such building or other structure thereon without cost to the owner thereof, from any damage by reason of the excavation, and shall be liable to the owner of such property for any such damage, excepting only for minor settlement cracks in buildings or other structures.

California Building Code (CBC) Section 3307 provides additional protection of adjoining property from damage during construction, remodeling, and demolition work. Protection must be provided for footings, foundations, party walls, chimneys, skylights, and roofs.

Caltrans has identified building damage significance guidance that provides thresholds for different categories of structures, including historic buildings that may not be considered extremely fragile (Table 2).

Table 2
Caltrans Vibration Damage Potential Threshold Criteria

Structure and Condition	Significance Thresholds (in/sec PPV)	
	Transient Sources	Continuous/ Frequent/ Intermittent Sources
Extremely fragile historic buildings, ruins, ancient monuments	0.12	0.08
Fragile buildings	0.2	0.1
Historic and some old buildings	0.5	0.25
Older residential structures	0.5	0.3
New residential structures	1.0	0.5
Modern industrial/commercial buildings	2.0	0.5
Source: California Department of Transportation, 2013. Transient noise is that whose average properties do not remain constant over time and are considered extremely short in duration (e.g., single gunshot)		

City of Carson. The Carson Municipal Code (CMC) governs construction-related vibration issues and public notification. CMC Section 9147.2 states that no use can create a disturbance to the surrounding area through vibration, noise, or other radiations. Section 12.08.560 limits the vibration from the operation of any device that creates vibration which is above the vibration perception threshold of any individual at or beyond the property boundary of the source if on private property, or at 150 feet (46 meters) from the source if on a public space or public right-of-way is prohibited. The perception threshold shall be a motion velocity of 0.01 in/sec over the range of 1 to 100 Hertz.

Methodology

Construction Vibration. Ground-borne vibration impacts during construction activities were evaluated for both on-site and off-site construction activities by identifying potential vibration sources (e.g., construction equipment), estimating the vibration levels at off-site structures, and comparing the proposed impacts against applicable vibration significance thresholds.

Operational Vibration. As with many non-industrial projects, the Proposed Project does not include land uses that would generate high levels of ground-borne vibration. Instead, any vibration related to operation of the Proposed Project would involve vehicle activity traveling to and from the Project Site. However, vibration from vehicle activities using rubber-tired wheels is unlikely to be perceptible by people. Rubber-tired vehicles traveling at a distance of 50 feet typically generate groundborne vibration of approximately 63.5 VdB.[3] The typical threshold of perception for groundborne vibration is approximately 65 VdB.[4] As such, operational impacts on ground-borne vibration are not analyzed further.

Threshold of Significance

Groundborne Vibration Thresholds. There are no adopted City standards or other applicable regulations that would govern the Project's vibration impacts. In assessing impacts related to noise and vibration in this section, the City uses Appendix G as the thresholds of significance. The FTA's criteria in its 2018 Transit Noise and Vibration Impact Assessment manual will be used where applicable and relevant to assist in analyzing the Appendix G thresholds. In addition, Caltrans' thresholds for historic buildings will be used when structures are not Category IV structures considered extremely susceptible to vibration damage.

Existing Conditions

Existing Ambient Vibration Levels

The Project Site is developed with five buildings that house commercial uses, including a used car facility and new car dealership. These commercial activities involve use of rubber-tiered vehicles and do not involve major equipment that can cause groundborne vibration.

[3] Federal Transportation Administration, Transit Noise and Vibration Impact Assessment Manual; Generalized Ground Surface Vibration Equations (Table 6-10); September 2018.

[4] Ibid.

The primary source of groundborne vibration near the Project Site is vehicle travel. For example, Avalon Boulevard carried 29,718 average daily vehicles at Carson Street in 2018.[5] The San Diego Freeway that flanks the eastern portion of the Project Site carried about 220,000 annual average daily trips at Avalon Boulevard in 2021.[6] The blend of passenger vehicles, trucks, delivery trucks, transit buses, and other light-, medium-, and heavy-duty vehicles generate minimal levels of vibration. As noted by federal guidance, "[i]t is unusual for vibration from sources such as buses and trucks to be perceptible…"[7] As such, vehicle movement generates imperceptible ground vibration, with the occasional exception of heavy-duty vehicles that travel over speed bumps, potholes, and other street irregularities.

There are several buildings near the Project Site that could be exposed to groundborne vibration during construction and operation of the proposed development that include:

- Residences, Garston Avenue; 75 feet south of the Project Site. These one- and two-story timber and stucco structures would be considered Category III structures (Non-engineered timber and masonry) under FTA guidelines. There are other adjacent buildings along 213th Street that are set back the same distance from the Project Site that would experience similar levels of groundborne vibration and generally are of similar construction.

- Bel-Aire Park mobile homes, 21425 Avalon Boulevard; 430 feet southwest of the Project Site. These one-story structures would be considered Category III structures (Non-engineered timber and masonry) under FTA guidelines.

- Residences, 213th Street; 720 feet west of the Project Site. These one- and two-story timber and stucco structures would be considered Category III structures (Non-engineered timber and masonry) under FTA guidelines.

Analysis of Project Impacts

a. Generation of excessive groundborne vibration or groundborne noise levels?

Less Than Significant Impact.

Construction

Building Damage Vibration Impact – On-Site Sources

Construction equipment can produce groundborne vibration based on equipment and methods employed. While this spreads through the ground and diminishes in strength with distance, buildings on nearby soil can be affected. This ranges from no perceptible effects at the lowest levels, low

[5] City of Carson Traffic Count Map, 2018; https://ci.carson.ca.us/content/files/pdfs/BusinessDev/demographics/Traffic_Count_Map.pdf .

[6] California Department of Transportation, Traffic Census Program 2021 data; https://dot.ca.gov/programs/traffic-operations/census.

[7] Federal Transit Administration, Transit Noise and Vibration Impact Assessment Manual, September 2018.

rumbling sounds and perceptible vibration at moderate levels, and slight damage at the highest levels. Table 3 summarizes vibratory levels for common construction equipment.

Table 3
Vibration Source Levels for Construction Equipment

Equipment	Approximate PPV at 25 feet (in/sec)
Pile Driver (impact)	0.644
Pile Drive (sonic)	0.170
Clam shovel drop (slurry wall)	0.202
Hydromill (slurry wall)	0.008
Vibratory Roller	0.210
Hoe Ram	0.089
Large Bulldozer	0.089
Caisson Drilling	0.089
Loaded Truck	0.076
Jackhammer	0.035
Small Bulldozer	0.003
Source: Federal Transit Administration, Transit Noise and Vibration Impact Assessment Manual, 2018.	

Groundborne vibration would be generated by a number of construction activities at the Project site. As a result of equipment that could include on-site bulldozer operations or the vibrational equivalent, vibration velocities of up to 0.017 inches per second PPV are projected to occur at the nearest structures. These impact is below the 0.20 in/sec PPV thresholds of significance for Category III structures. Other potential construction activities would produce less vibration and have lesser potential impacts on nearby sensitive receptors. As a result, construction-related structural vibration impacts would be considered less than significant.

Table 4
Building Damage Vibration Levels – On-Site Sources

Off-Site Receptor Location	Distance to Project Site (feet)	Vibration Velocity Levels at Off-Site Sensitive Receptors from Construction Equipment (in/sec PPV)					Significance Criterion (PPV)	Potentially Significant Impact?
		Large Bulldozer	Caisson Drilling	Loaded Trucks	Jack-hammer	Small Bulldozer		
FTA Reference Vibration Level (25 Feet)	N/A	0.089	0.089	0.076	0.035	0.003	--	--
Residences, Garston Ave.	75	0.017	0.017	0.015	0.007	0.001	0.20[a]	No
Bel-Aire Park Mobile Homes	430	0.001	0.001	0.001	0.000	0.000	0.20[a]	No
Residences - 213th St.	720	0.001	0.001	0.000	0.000	0.000	0.20[a]	No
[a] FTA criterion for Category III (non-engineered timber and masonry buildings) Source: DKA Planning, 2024.								

Building Damage Vibration Impact – Off-Site Sources

Construction of the Project would generate trips from large trucks including haul trucks, concrete mixing trucks, concrete pumping trucks, and vendor delivery trucks. Regarding building damage, based on FTA data, the vibration generated by a typical heavy-duty truck would be approximately 63 VdB (0.006 PPV) at a distance of 50 feet from the truck.[8] According to the FTA "[i]t is unusual for vibration from sources such as buses and trucks to be perceptible, even in locations close to major roads." Nonetheless, there are buildings along the Project's anticipated haul route on Avalon Boulevard that are situated away from the right-of-way and would be exposed to groundborne vibration levels of approximately 0.006 PPV. This estimated vibration generated by construction trucks traveling along the anticipated haul route(s) would be well below the most stringent building damage criteria of 0.12 PPV for buildings extremely susceptible to vibration. The Project's potential to damage roadside buildings and structures as the result of groundborne vibration generated by its truck trips would therefore be considered less than significant.

Operation

During operation of the mixed-use residential and commercial development, there would be no significant stationary sources of groundborne vibration, such as heavy equipment or industrial operations. Operational groundborne vibration in the Project Site's vicinity would be generated by its related vehicle travel on local roadways. However as previously discussed, road vehicles rarely create vibration levels perceptible to humans unless road surfaces are poorly maintained and have potholes or bumps. As a result, the Project's long-term vibration impacts would be less than significant.

[8] Federal Transit Administration, "Transit Noise and Vibration Impact Assessment," May 2006, Figure 7-3.

TECHNICAL APPENDIX

DouglasKim+Associates,LLC

21212 Avalon Boulevard Project

Construction Vibration

Receptor: Residences - Garston Avenue
Equipment: Large Bulldozer, Auger Drill Rig

Source PPV (in/sec)	0.089
Reference Distance (ft)	25
Ground Factor (N)	1.5
Distance (ft)	75
Vibration Level (in/sec)	**0.017**

Receptor: Residences - Garston Avenue
Equipment: Loaded Trucks

Source PPV (in/sec)	0.076
Reference Distance (ft)	25
Ground Factor (N)	1.5
Distance (ft)	75
Vibration Level (in/sec)	**0.015**

Receptor: Bel-Aire Park Mobile Homes
Equipment: Large Bulldozer, Auger Drill Rig

Source PPV (in/sec)	0.089
Reference Distance (ft)	25
Ground Factor (N)	1.5
Distance (ft)	430
Vibration Level (in/sec)	**0.001**

Receptor: Bel-Aire Park Mobile Homes
Equipment: Loaded Trucks

Source PPV (in/sec)	0.076
Reference Distance (ft)	25
Ground Factor (N)	1.5
Distance (ft)	430
Vibration Level (in/sec)	**0.001**

Receptor: Residences, 213th Street
Equipment: Large Bulldozer, Auger Drill Rig

Source PPV (in/sec)	0.089
Reference Distance (ft)	25
Ground Factor (N)	1.5
Distance (ft)	720
Vibration Level (in/sec)	**0.001**

Receptor: Residences, 213th Street
Equipment: Loaded Trucks

Source PPV (in/sec)	0.076
Reference Distance (ft)	25
Ground Factor (N)	1
Distance (ft)	720
Vibration Level (in/sec)	**0.003**

21212 Avalon Boulevard Project

Receptor: Residences - Garston Avenue
Equipment: Small Dozer-Type Equipment

Source PPV (in/sec)	0.003
Reference Distance (ft)	25
Ground Factor (N)	1.5
Distance (ft)	75
Vibration Level (in/sec)	**0.001**

Receptor: Residences - Garston Avenue
Equipment: Jackhammer

Source PPV (in/sec)	0.035
Reference Distance (ft)	25
Ground Factor (N)	1.5
Distance (ft)	75
Vibration Level (in/sec)	**0.007**

Receptor: Bel-Aire Park Mobile Homes
Equipment: Small Dozer-Type Equipment

Source PPV (in/sec)	0.003
Reference Distance (ft)	25
Ground Factor (N)	1.5
Distance (ft)	430
Vibration Level (in/sec)	**0.000**

Receptor: Bel-Aire Park Mobile Homes
Equipment: Jackhammer

Source PPV (in/sec)	0.035
Reference Distance (ft)	25
Ground Factor (N)	1.5
Distance (ft)	430
Vibration Level (in/sec)	**0.000**

Receptor: Residences, 213th Street
Equipment: Small Dozer-Type Equipment

Source PPV (in/sec)	0.003
Reference Distance (ft)	25
Ground Factor (N)	1.5
Distance (ft)	720
Vibration Level (in/sec)	**0.000**

Receptor: Residences, 213th Street
Equipment: Jackhammer

Source PPV (in/sec)	0.035
Reference Distance (ft)	25
Ground Factor (N)	1.5
Distance (ft)	720
Vibration Level (in/sec)	**0.000**

Sources

California Department of Transportation (Caltrans), *Transportation and Construction Vibration Guidance Manual*,
Federal Transit Administration (FTA), *Transit Noise and Vibration Impact Assessment*, September 2018

ATTACHMENT E
TRAFFIC MEMO

FEHR PEERS

Draft Memorandum

Date: September 4, 2024

To: Darren Embry and Vince Manzenberger, Faring

From: Miguel Núñez and Dylan Di, Fehr & Peers

Subject: Carson Kott Site Residential Project CEQA Assessment

LB24-0128

Project Description

The proposed Project (the "Project") analyzed in this study involves the construction of 283 townhome dwelling units and 32 affordable units at 21140 Avalon Boulevard, at the northeast corner of Avalon Boulevard & East 213th Street in the City of Carson. In addition to the 315 dwelling units the project will provide 643 parking spaces (566 spaces in private garages and 77 open parking spaces) and an internal roadway system providing access to designated parking areas. Project access will be provided via two driveways: one on Avalon Boulevard and another on East 213th Street. The site plan is shown in **Figure 1**. The purpose of this memorandum is to document the approach for determining potential significance of the Project's transportation related environmental effects per CEQA Guidelines Section 15064.

CEQA Assessment

CEQA Guidelines Section 15064 provides guidance for the process and approaches that may be used for determining environmental effects. Per Section 15064 (f)(7), the provisions of Section 15162 apply "when the project being analyzed is a change to, or further approval for, a project for which an Environmental Impact Report (EIR) or negative declaration was previously certified or adopted." The Project approval is proposed as an addendum to the General Plan EIR, which analyzed the potential for residential development at this site.

CEQA Guidelines Section 15162 states that "when an EIR has been certified or negative declaration adopted for a project, no subsequent EIR shall be prepared for that project unless the lead agency determines, on the basis of substantial evidence in the light of the whole record, one or more of the following":

1. Substantial changes are proposed in the project which will require major revisions of the previous EIR or negative declaration due to the involvement of new significant environmental effects or a substantial increase in the severity of previously identified significant effects.
2. Substantial changes occur with respect to the circumstances under which the project is undertaken which will require major revisions of the previous EIR or Negative Declaration due to the involvement of new significant environmental effects or a substantial increase in the severity of previously identified significant effects.
3. New information of substantial importance, which was not known and could not have been known with the exercise of reasonable diligence at the time the previous EIR was certified as complete or the Negative Declaration was adopted.

Transportation Related Qualifications

1. Substantial changes are proposed in the project which will require major revisions of the previous EIR or negative declaration due to the involvement of new significant environmental effects or a substantial increase in the severity of previously identified significant effects

Fehr & Peers reviewed the General Plan EIR and related information such as the City's zoning map, City of Carson Transportation Analysis Guidelines, and Southern California Association of Governments (SCAG) travel demand model land use inputs for the Project area used for the recent Carson 2040 General Plan (the "General Plan") EIR. The General Plan EIR transportation section identified significant impacts associated with home-based per capita VMT and total VMT per service population. The home-based per capita VMT impact was mitigated to a level below significance with various strategies. The total VMT per service population impact was determined to be significant and unavoidable. Additionally, since the City of Carson could not demonstrate a reduction of 15 percent or more for total VMT per service population, the General Plan makes an incremental but significant contribution to a cumulative regional impact. In addition, the General Plan found no significant transportation impacts related to inadequate emergency access, substantial increase in hazards due to a geometric design feature, or conflict with adopted circulation program, plan, ordinance, or policy.

The site is designated by the General Plan as Downtown Mixed Use, which allows active commercial uses and residential uses. The General Plan EIR analysis and significant impacts related to VMT are based on the SCAG model and General Plan land uses, and VMT methodologies and thresholds of significance adopted by the City of Carson. The General Plan analysis forecasted increases in residential unit and population growth in the project vicinity and the Project is within the analyzed level of growth. As described above, the General Plan EIR disclosed transportation impacts relating to VMT and this project does not exceed the development density or intensity contemplated by the General Plan and therefore and would not

require major revisions to the prior EIR due to new significant increase in the severity of identified impacts.

The General Plan EIR also analyzed the other transportation related CEQA areas and did not find a significant impact and the Project is consistent with those conclusions as discussed below:

- Conflict with adopted circulation program, plan, ordinance, or policy: The General Plan EIR analysis reviewed programs, plans, ordinances, and policies addressing the circulation system, including transit, roadway, bicycle, and pedestrian facilities and found no conflicts. The project is consistent with City policies, programs, and ordinances such as increasing residential housing near corridors with transit, promoting active transportation, and directing commuter traffic to arterial streets and collectors, as appropriate. The project would be consistent with City ordinances and would not preclude the implementation of a policy or projects identified in the City's Bike Plan.
- Substantially increasing hazards due to a geometric design feature: The General Plan EIR analysis found no significant impact for this issue area and discusses the design of access points, addressing or reducing potential conflict points of various users, and considering the relation of land uses and road users including commercial and truck traffic, commuter traffic, pedestrians, and cyclists. Review of project access is conducted for each individual project to confirm compliance with City standards and address the provision of adequate sight distance, sidewalks, crosswalks, and traffic control to minimize potential negative effects. The Project will have two driveways that align with existing driveway locations with sidewalks, turn lanes, and striping. The project will not introduce new access points or additional geometric design features to the public right-of-way that would substantially increase hazards due to a geometric change.
- Result in inadequate emergency access: The General Plan EIR reviewed emergency accessibility at a programmatic level and determined the update would not result in inadequate emergency access. The project is located at the northeast corner of Avalon Boulevard & 213th Street, which are respectively six and four-lane corridors fronting the project site. The project will not make alterations to the public right-of-way or physical environment that would negatively impact emergency access to the site or along the adjacent corridors.

Additional information regarding the project is now available that support this finding. The relevant information now available includes:

- The project includes construction of 32 affordable infill housing units, which can help improve the jobs-housing match and shorten commute VMT. In areas with more balanced jobs-housing match, affordable housing has been shown to generate lower VMT than market rate housing. Per OPR guidance a project consisting of a high percentage of affordable units my be a basis for the lead agency to find a less than significant impact for a 100% affordable residential project or residential portions of

mixed-use projects, and a project which includes any affordable residential units may factor the effect of the affordable units on VMT in the VMT assessment for those units.

- The project has voluntarily proposed to include a reduced parking supply. Reduction of parking supply is considered an effective VMT reducing strategy as it incentivizes lower car ownership and use of non-vehicle modes for everyday travel.
- The project has voluntarily proposed to share bicycle and transit information, such as maps and schedules, that would make it easier for residents to visit nearby destinations without a vehicle. There are shopping and employment areas along Avalon Boulevard and Carson Street within a mile, which is within the distance residents may be willing to walk, bike, or take transit for local trips.

As described above, known changes to the project from what was previously analyzed, would not contribute to increased VMT and would not lead to a more severe adverse impact since the certification of the General Plan Final EIR and the adoption of the General Plan in April 2023. Therefore, the Project is consistent with the General Plan EIR analyses and would not result in new significant effects or an increase in the severity of previously identified significant effects due to changes in the project.

2. Substantial changes occur with respect to the circumstances under which the project is undertaken which will require major revisions of the previous EIR or negative declaration due to the involvement of new significant environmental effects or a substantial increase in the severity of previously identified significant effects

The Project site is adequately sized to accommodate internal circulation and proposed units consistent with the City's requirements. There are no atypical aspects of the Project or parcel that are anticipated to have specific or additional transportation related environmental effects associated with the Project compared with the General Plan.

The General Plan EIR transportation section identified significant impacts associated with home-based per capita VMT and total VMT per service population. The home-based per capita VMT impact was mitigated to a level below significance with various strategies. The total VMT per service population impact was determined to be significant and unavoidable. Additionally, since the City of Carson could not demonstrate a reduction of 15 percent or more for total VMT per service population, the General Plan makes an incremental but significant contribution to a cumulative regional impact.

The General Plan EIR also analyzed the other transportation related CEQA areas and did not find a significant impact. The circumstances under which the Project is undertaken are consistent with those conclusions as discussed below.

- Conflict with adopted circulation program, plan, ordinance, or policy: The General Plan EIR analysis reviewed programs, plans, ordinances, and policies addressing the circulation

system, including transit, roadway, bicycle, and pedestrian facilities and found no conflicts. The project is consistent with City policies, programs, and ordinances such as increasing residential housing near corridors with transit, promoting active transportation, and directing commuter traffic to arterial streets and collectors, as appropriate. The project would be consistent with City ordinances and would not preclude the implementation of a policy or projects identified in the City's Bike Plan. Therefore, no additional impacts from conflicts with program, plan, ordinance, or policy would be expected to occur to the circumstances under which the project is undertaken.

- Substantially increasing hazards due to a geometric design feature: The General Plan EIR analysis found no significant impact for this issue area and discusses the design of access points, addressing or reducing potential conflict points of various users, and considering the relation of land uses and road users including commercial and truck traffic, commuter traffic, pedestrians, and cyclists. Review of access is conducted for each individual project to confirm compliance with City standards and address the provision of adequate sight distance, sidewalks, crosswalks, and traffic control to minimize potential negative effects. The Project is consistent with aspects analyzed in the General Plan, such as the parcel's shape or size, compared to what was analyzed for the General Plan. The Project will include two existing driveway locations with sidewalks, turn lanes, and striping, and will not introduce a new driveway. The project will utilize existing access points or additional geometric design features to the public right-of-way that would substantially increase hazards due to a geometric change. Therefore, the Project won't be expected to have additional environmental impacts due to geometric changes with respect to the circumstances.
- Result in inadequate emergency access: The General Plan EIR reviewed emergency accessibility at a programmatic level and determined the update would not result in inadequate emergency access. The project is located at the northeast corner of Avalon Boulevard & 213th Street, which are respectively six and four-lane corridors fronting the project site. The project will not make alterations to the public right-of-way or physical environment that would negatively impact emergency access to the site or along the adjacent corridors.

Because the General Plan EIR identified a mitigable home-based per capita VMT impact and a significant and unavoidable total VMT per service population impact, the Project would not result in substantial changes occur with respect to the circumstances and new or more severe significant environmental effects identified in the General Plan EIR.

3. New information of substantial importance, which was not known and could not have been known with the exercise of reasonable diligence at the time the previous EIR was certified as complete or the negative declaration was adopted, shows any of the following:

(a). The Project will have one or more significant effects not discussed in the previous EIR or negative declaration.

As described in the prior sections, the Project does not exceed the density or intensity studied in the General Plan and would comply with City ordinances and policies. There is no substantial new information or unique aspects of the project which would lead to additional impacts since the certification of the General Plan Final EIR and the adoption of the General Plan in April 2023. Therefore, the Project would not be expected to have significant effects not discussed in the General Plan EIR.

High and low VMT maps were prepared when the City's Transportation Study Guidelines were developed. The maps indicate that this site is located in a portion of Carson where daily home-based VMT per capita is 13.1, which is nine percent less than the City average of 14.4, indicating the site is in a lower VMT area compared with the City's per capita average VMT for residential land uses.

The project would not conflict with or preclude the implementation of mitigations discussed in the EIR. The project has agreed to voluntarily provide maps and schedules with information pertaining to local transit services and bicycle facilities that can be used by residents for local travel.

(b). Significant effects previously examined will be substantially more severe than shown in the previous EIR.

As described in the prior sections, there is no substantial new information which would lead to more severe impacts since the certification of the General Plan Final EIR and the adoption of the General Plan in April 2023., As discussed above, this project is located in an area that exhibits a reduction relative to the City's average per capita VMT for residential uses. Therefore, the Project would not be expected to have any more severe adverse impacts related to transportation due to new information.

(c). Mitigation measures or alternatives previously found not to be feasible would in fact be feasible and would substantially reduce one or more significant effects of the project, but the project proponents decline to adopt the mitigation measures or alternatives.

The General Plan EIR transportation section identified significant impacts associated with home-based per capita VMT and total VMT per service population. The home-based per capita VMT impact was mitigated to a level below significance with various strategies. The total VMT per service population impact was determined to be significant and unavoidable. All mitigation measures analyzed in the General Plan EIR were feasible. There is no new information to inform that the impacts of mitigation measures have changed since the adoption of the General Plan in

April 2023. Therefore, the Project will not have mitigation measures previously found not to be feasible in fact be feasible.

(d). Mitigation measures or alternatives which are considerably different from those analyzed in the previous EIR would substantially reduce one or more significant effects on the environment, but the project proponents decline to adopt the mitigation measure or alternative.

As described in the prior sections, the home-based per capita VMT impact was mitigated to a level below significance with various strategies, and the total VMT per service population impact was determined to be significant and unavoidable. The General Plan EIR adopted all feasible mitigation measures analyzed. There is no new information to inform that any mitigation measures or alternatives that were considerably different from those analyzed in the previous EIR would substantially reduce any significant effects. Therefore, the Project will not have mitigation measures considerably different from those analyzed in the previous EIR.

Conclusion

The Project does not exceed the development density or intensity contemplated by the General Plan and therefore would comply with City ordinances and policies. Furthermore, the Project would not be expected to have additional adverse impacts related to transportation that were not analyzed in the General Plan EIR due to factors such as an affordable housing component, lower than City average per capita VMT for residential land uses, and voluntary provision of reduced parking, transit maps, and bike maps. There is no new or unique information pertaining to the project or mitigation measures identified in the General Plan EIR that result in new information that would trigger new or more severe impacts. Therefore, the Project would be eligible for an addendum to the General Plan EIR, which analyzed the potential for residential development at this site, instead of a full subsequent EIR.

W:\Long Beach N Drive\Projects\Active\2024\0128.00 Kott Triangle Site Traffic Study\Graphics\AI\PDFs\Triangle Kott Site Site Plan Figure.pdf



SITE PLAN KEYNOTES

1. PROPERTY LINE
2. ENTRY GATE
3. TRASH ENCLOSURE
4. PERPENDICULAR PARKING SPACE (9'X18')
5. ACCESSIBLE PARKING SPACE (9'X18')
6. ACCESSIBLE PATH OF TRAVEL
7. AMENITY AREA (SEE LANDSCAPE PLANS)
8. MAIL PARKING SPACE

NOTE: ALL NON-ADA COMPLIANT SIDEWALK RAMPS ABUTTING THE PROJECT SITE WILL BE UPGRADED TO CURRENT CODE

LEGEND

- PRODUCT A
- PRODUCT B
- PRODUCT C
- PRODUCT D
- CLUBHOUSE
- PROPERTY LINE
- ACCESSIBLE PATH OF TRAVEL
- TYPICAL PERPENDICULAR & ACCESSIBLE PARKING SPACE (18'-0" / 9'-0")
- A — ACCESSIBLE UNIT
- UNIT ENTRY
- 1 / A — Building Number / Building Type

*Site Plan shall meet all Engineering and NPDES requirements.

Overall Site Summary

Gross Site Area	*14.08 Acres*
Affordable Units	*32 du*
Townhome Units	*283 du*
Total Dwelling Units	315 du
Gross Density	22.4 Du/Ac
Existing Zoning / Land Use	Commercial, Automotive
Proposed Zoning / Land Use	Commercial, Automotive

Overall Building Summary

Building Type	Quantity	Bldg Footprint Area	Gross Bldg Area	Total Area
Building A2 - Affordable	4	938 sf	938 sf	3,752 sf
Building A3 - Affordable	8	1,407 sf	1,407 sf	11,256 sf
Product B - 5 Plex	13	3,346 sf	11,098 sf	144,274 sf
Product B - 6 Plex	3	4,013 sf	13,227 sf	39,681 sf
Product C - 8 Plex	2	5,336 sf	18,351 sf	36,702 sf
Product C - 10 Plex	7	6,614 sf	21,522 sf	150,654 sf
Building D - 6 Plex	3	4,529 sf	14,033 sf	42,099 sf
Building D - 8 Plex	12	5,759 sf	17,911 sf	214,932 sf
Pool Building	1	437 sf	437 sf	437 sf
Total				643,787 sf
FAR				1.05
Building Coverage			34.3%	210,647 sf

Townhome Site Summary

Townhome Site Area	*12.92 Acres*
Townhome Dwelling Units	283 du
Density	21.9 Du/Ac

Townhome Plan Summary

Plan	Beds	Net Unit Area	Quantity	%	Total Net Area	Avg. Unit Size
B Townhomes - P1	3	1,510 sf	51	18.0%		
B Townhomes - P2	3	1,714 sf	32	11.3%		
Subtotal B Townhomes			83			
C B2B - P1	2	1,375 sf	50	17.7%		
C B2B - P2	3	1,578 sf	36	12.7%		
Subtotal B2B			86			
D Rowtowns - P1	2	1,213 sf	12	4.2%		
D Rowtowns - P2	2	1,211 sf	12	4.2%		
D Rowtowns - P3	3	1,522 sf	45	15.9%		
D Rowtowns - P4	4	1,773 sf	45	15.9%		
Subtotal D Rowtowns			114			
Total			283	100%	434,779 sf	1,536 sf

Unit Mix	Quantity	%
2 Bedroom Total	74	26.1%
3 Bedroom Total	164	58.0%
4 Bedroom Total	45	15.9%
Total	283	100.0%

Townhome Open Space Summary

Private Open Space	24,377 sf	86 sf/Unit
Common Open Space	*106,390 sf*	
Total Open Space	130,767 sf	462 sf/Unit

Townhome Parking Summary - State Density Bonus Standard

Parking Required	Quantity	Ratio Req'd	Spaces Req'd
2 Bed	74	*1.50 Spaces/Unit*	111
3 Bed	164	*1.50 Spaces/Unit*	246
4 Bed	45	*2.00 Spaces/Unit*	90
Total Residential Parking Req'd		1.58 Spaces/Unit	447
Parking Provided		**Ratio Provided**	**Spaces Provided**
Garage Spaces		2.00	566
Driveway Spaces		0.00	*0*
On Site / Guest Spaces		0.27	*77*
Total Residential Parking Provided		2.27	643
Accessible Parking Required		**Ratio Req'd**	**Spaces Req'd**
Resident Open Spaces	77	5%	4

Affordable Site Summary

Gross Site Area	*1.16 Acres*
total Dwelling Units	32 du
Density	27.6 Du/Ac

Affordable Plan Summary

Plan	Beds	Net Unit Area	Quantity	%	Total Net Area	Avg. Unit Size
Affordable - P1	1	469	32		15,008 sf	469 sf

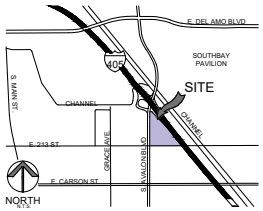
Affordable Open Space Summary

Private Open Space	0 sf	
Common Open Space	*21,000 sf*	
Total Open Space	21,000 sf	656 sf/Unit

Affordable Parking Summary - Carson Standard

Parking Required	Quantity	Ratio Req'd	Spaces Req'd
Studio & 1 Bed	32	*.50 Spaces/Unit*	16
Parking Provided		**Ratio Provided**	**Spaces Provided**
Open Parking Spaces		0.50	*16*
Accessible Parking Required		**Ratio Req'd**	**Spaces Req'd**
Resident Open Spaces	16	5%	1

VICINITY MAP



Source: ktgy Architecture, Faring

CARSON KOTT SITE
CARSON, CA #2023-1022

CONCEPTUAL DESIGN
SEPTEMBER 4, 2024

Figure 1
Site Plan